PARISIAN CHIRURGICAL JOURNAL;

BY

MONSIEUR DESAULT,

PRINCIPAL SURGEON TO THE HOTEL DIEU, PARIS:

TRANSLATED INTO ENGLISH

BY

R. GOSLING, *SURGEON,*

LONDON.

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M.DCC.XCIII.

TO

GEORGE CHANDLER,

JOHN BIRCH,

AND

HENRY CLINE,

ESQUIRES,

SURGEONS TO ST. THOMAS'S HOSPITAL,

THIS

TRANSLATION

OF THE

Parisian Chirurgical Journal

IS RESPECTFULLY DEDICATED,

BY

THEIR MOST OBEDIENT

HUMBLE SERVANT,

R. GOSLING.

PREFACE.

THE indulgence of the Public is ſolicited in favour of a Work, that has for its avowed object, the good of mankind and the improvement of the ſcience of ſurgery.

It is not ſufficient to be acquainted with the general and ancient hiſtory of this important art: its progreſſive and daily improvements ought to claim a ſuperior ſhare of our attention.

We are well acquainted with the ineſtimable advantages derived from the practical works of a Pott, a Gooch, and a Warner, and many others, whoſe names are unneceſſary to mention; and,

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if the ſphere of chirurgical information has been ſo much enlarged by the labours of our own countrymen, are we not juſtified in ſuppoſing, that the Public will be equally benefited by the obſervations of the authors of the Chirurgical Journal?

From the exalted character of Mr. Deſault, as an anatomiſt, and as a ſurgeon, much may, with propriety, be expected; and, I truſt, that thoſe, who honour theſe ſheets with a peruſal, will, in this inſtance at leaſt, not be diſappointed.

Of the general utility of the publication, after what Mr. Deſault has obſerved in his introduction, little remains to be ſaid.

The fidelity of the tranſlation has been attempted to be obſerved, as far

as

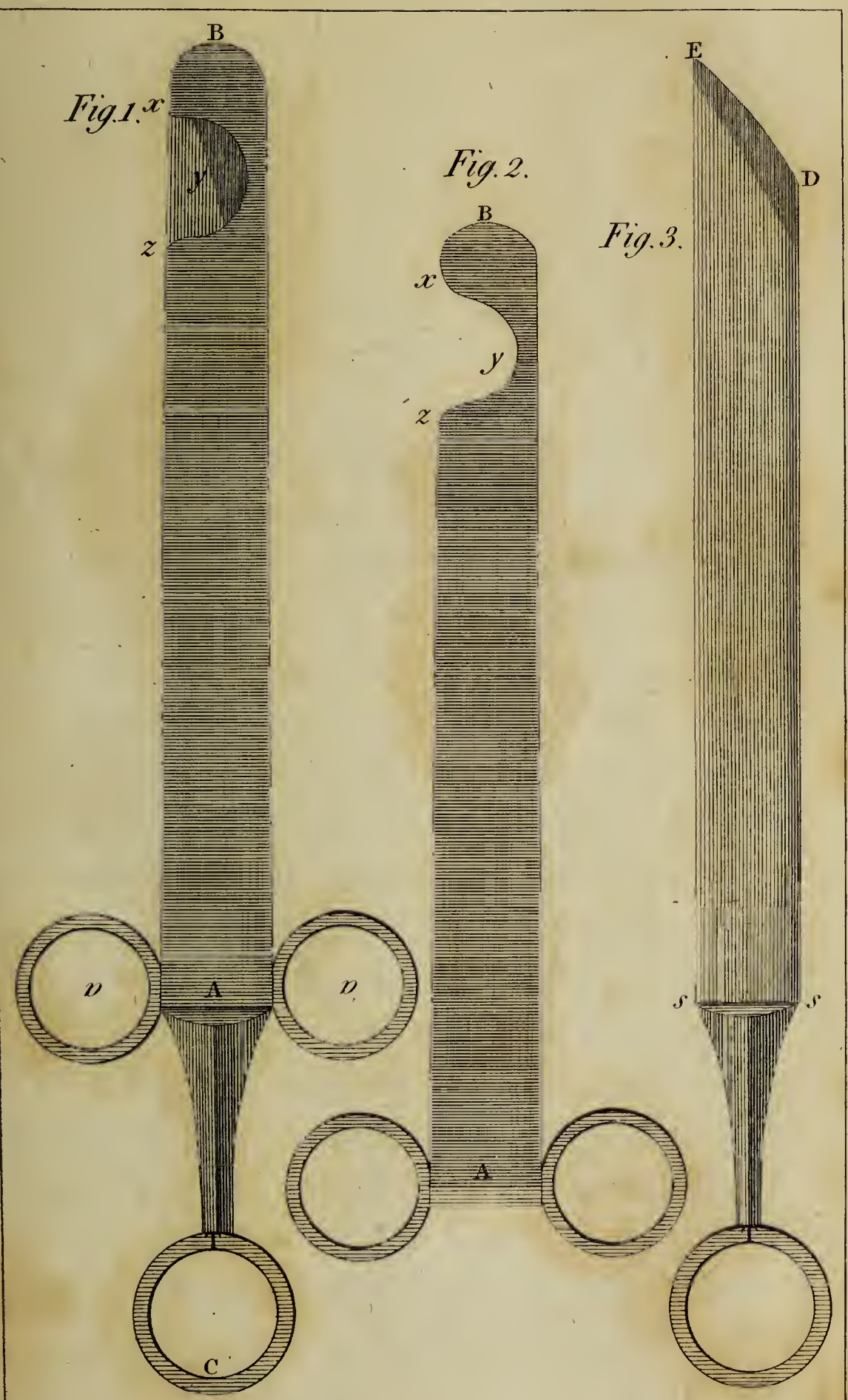
as the idiom of the two languages will admit.

And I now preſent it to the world, with the conſcioufneſs of meaning well, and with an earneſt ſolicitude that I ſhall receive ſome thanks from my profeſſional brethren, for attempting to diffuſe thoſe improvements in ſurgery that may be ſuggeſted by our ingenious and enlightened neighbours.

Fenchurch-Street,
June 29th, 1793.

INTRO-

Plate I.st Vol I.st



INTRODUCTION.

Occidit qui non ſervat.

WHERE can this maxim with more peculiar propriety be affixed than at the beginning of a Chirurgical Journal? It conveys one of thoſe important truths which cannot be too often inculcated, or too attentively conſidered by every Surgeon: on all occaſions, his conduct will be influenced by its obſervance; like a faithful monitor, it will inceſſantly recall his duty to recollection; and warn him, that not only what he does, but what he omits to do, may render him guilty of homicide. It would have been fortunate for the cauſe of humanity, if they, who had deſtined themſelves to the curative art, had reflected on this motto with the attention it deſerves; the extent and importance of the duties attached to their profeſſion would have been more deeply impreſſed on their minds.

The proſpect of the obligations they would owe to ſociety might have induced them to renounce their intentions; but, what inconvenience would have ariſen! Little can be expected from the exertions of a man, who, conſcious of his own indolence, even ſhrinks from reflection on his duty. If the truth of this maxim had its full influence, the practice of ſurgery would be confined to men of talents and integrity. The ſtudent, ſenſible that he is reſponſible for conſequences which his want of aſſiduity may occaſion, will apply to more advantage his means of information, and avoid the riſk of being, at ſome period, the murderer of him, who implores his aſſiſtance, and who expects life from his attention. The man of genius, who has made uſeful diſcoveries, and the experienced practitioner, are both convinced, in the early part of their lives, that they cannot, without a crime injurious to humanity, reſerve excluſively to themſelves the fruit of their labours. And, as the death of many might be occaſioned by the delay of a ſingle day, they will be eager in adopting the readieſt mode of publication. The Chirurgical Journal will be the quickeſt and leaſt expenſive medium of communication; and it offers ſo many other

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advantages, that we have reaſon to be aſtoniſhed that no one conceived the idea till the middle of the eighteenth century: it is not a work for which there can be a ſubſtitute; and, at preſent, it will ſupply the place of all others. Too many books on ſurgery are already publiſhed, and we have reaſon to apprehend the number will be ſtill more multiplied: theſe circumſtances will neceſſarily tend to injure the ſcience; for, independant of the expence of new publications which the finances of a young practitioner will rarely permit him to afford, he expends his time in the peruſal of books containing no new information, or, perhaps, only a trifling number of obſolete facts, which might be compriſed in a few pages. Science is, at preſent, too much advanced to ſuppoſe that new ideas only can be preſented to the mind, and that volumes can be written on ſubjects already frequently diſcuſſed, and which, in fact, would contain merely the ſame ideas conveyed in different language.

Surgery then could not fail of being improved, if, inſtead of compoſing a volume, or even a complete ſyſtem, in which ſome new truths are blended with the whole, we were to expoſe theſe truths with ſimplicity

and preciſion in a Journal. If we reflect on the fate of all works, both ancient and modern, we ſhall find them, in ſome meaſure, defective, and that, in ſome degree, they are ſuſceptible of improvement, and we mean ours to ſerve as a ſupplement to theſe productions. This work has the invaluable advantage of belonging to all nations, to all ages, and of being always new. It is eaſy to ſupply omiſſions, to correct the errors of others and ourſelves. It is the property of all, who contribute, by their labour, to its perfection; and, by publiſhing their names with their productions, we give to each the tribute of merit which is his due. In whatever country profeſſional men may reſide, it offers an eaſy method of correſpondence, and opens an ample field for that diſcuſſion which is frequently neceſſary to diſſipate doubt, and to ſerve for the diffuſion of truth. From the numerous and important obſervations of which it ought to be the repoſitory, it will furniſh ſuch caſes to the young and timid practitioner as will ſerve for the application of his precepts, and tend to diſpel his doubts and confirm his practice; it will be even uſeful to the experienced practitioner, by affording him new information: for, what

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man will be preſumptuous enough to ſay, that his knowledge cannot be enlarged by the labours of others? Thus, in whatever point of view the Chirurgical Journal is conſidered, it preſents reſources that are expected in vain from any other production, and, at the ſame time, is exempt from the inconveniences to which they are ſubject. It becomes then the duty of thoſe who love and cultivate this art, to contribute all in their power to the perfection of which it is ſuſceptible; for, in ſurgery, to demonſtrate that an undertaking is uſeful, is to impoſe on every one an obligation to co-operate for its completion; and we do not ſay too much in obſerving, that, by a refuſal, we are guilty of voluntary homicide, according to the maxim we ſhall never ceaſe to repeat, *Occidit qui non ſervat.*

PARISIAN

CHIRURGICAL JOURNAL.

CASE I.

A Wound in the Mouth by a Piſtol-ſhot, with a Fracture of the lower Jaw, a Hole in the Arch of the Palate extending to the Velum Pendulum Palati. Balls lodged in the poſterior Noſtrils. Deglutition completely obſtructed. A hollow Bougie introduced into the Æſophagus through the Noſe, and worn for a Month.

[By Mr. MANOURY, Surgeon to the Hôtel Dieu.]

ON the 18th December, 1789, Mr. Deſault, at half paſt eleven o'clock in the evening, was called in to the aſſiſtance of a young man, in the Rue Conqueron, who had ſhot himſelf in the mouth with a piſtol. There was a profuſe hemorrhage from the lips, cheeks, and noſtrils; and an hour had

ſcarce elapſed, from the time of the accident, when the face was conſiderably ſwelled; the inſide of the mouth was blackened by the powder and ſmoke, and the right half of the tongue lacerated and burnt; the lower jaw was fractured on the right ſide, between the canine tooth and the firſt dens molaris; the right fragment was ſituated behind the left, and rode over it above half an inch; the other teeth, as well as the inferior and ſuperior alveolar proceſſes, had eſcaped injury; but, towards the poſterior and right ſide of the arch of the palate, a hole was diſcerned ſufficiently large to admit the thumb with eaſe, and connected with a laceration that extended to the velum pendulum palati. From ſuch an accident, the moſt ſerious conſequences were to be apprehended; beſides, there was reaſon to ſuppoſe that the balls, after croſſing the poſterior noſtrils, might have penetrated the cranium, and be lodged in the brain. To aſcertain the extent of the miſchief, Mr. Deſault introduced a female ſtaff through the opening in the arch of the palate, which he paſſed forward, and in every poſſible direction, without diſcovering any communication with the cranium, which induced him to hope that the caſe might terminate favourably; but as the patient had ſignified that the piſtol was loaded with three balls, it yet remained to diſcover their ſituation. All reſearches had been hitherto ineffectual: he intimated, by ſigns, that he had not ſwallowed them; and, as they were not found in his clothes, nor in the blood that he loſt, it was ſuſpected they were ſtopped

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by, and buried in, the ethmoidal cells and ſphenoidal ſinuſſes, &c.

The functions of the brain not being influenced by the accident, was a circumſtance favourable to the event of the caſe. The hemorrhage, from the noſe and the arch of the palate, was conſiderable enough to require immediate attention. With this view, a flexible ſilver probe was introduced through the right noſtril into the fauces, the extremity of it paſſed forward, and, by the aſſiſtance of a finger, brought out of the mouth: in effecting this, ſome difficulty was experienced in conſequence of the ſwelling. At the extremity of the probe, the ends of two waxed ligatures were fixed, to the middle of which a doſſil of lint was tied, ſufficiently large to fill up that part of the pharynx that correſponded to the poſterior noſtrils. In drawing the probe and ligature through the noſe, the doſſil was conveyed with it, and, by means of the finger, introduced by the fauces, it was applied to the poſterior opening of the noſtrils. The two ligatures that paſſed out of the noſe were then ſeparated, and one was applied to the ſeptum naſi, and the other to the oppoſite ſide. The noſtrils were then filled with ſmall doſſils of lint; and, on the laſt, which was larger than the reſt, the ends of the two ligatures were tied: thoſe that remained in the mouth, for the purpoſe of withdrawing the doſſil ſituated in the æſophagus, were fixed on the cheek.

After this hemorrhage was ſtopped, the reduction of the fractured jaw was unſucceſsfully attempted, in conſequence of the ſwelling and tenſion of the ſoft

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parts. Compreſſes, moiſtened with aq. veg. min. were conſtantly applied to the chin, cheeks, and ſuperior part of the neck, and a decoction of marſhmallows preſcribed for a gargle: the ſwelling increaſed conſiderably during the night: the next day deglutition was painful and laborious; and, as the ſwelling progreſſively increaſed, on the ſecond day he was unable to ſwallow; but ſtill, though appearances were alarming, Mr. Deſault, relying on caſes he had formerly ſeen, did not deſpair of ſucceſs.

The doſſils of lint, with which the poſterior noſtrils were filled, being deemed unneceſſary, were withdrawn, ſome through the noſtril, and that in the fauces through the mouth, by means of ligatures, left, with that intention, on the outſide of the cheek. A large hollow bougie, of the elaſtic gum, with a bent probe, like a catheter, was introduced by the left noſtril, and puſhed as far as the middle and poſterior part of the pharynx: the probe was then withdrawn with one hand, whilſt the bougie was ſupported and fixed by the other: it was puſhed ſtill more forward, with the intention of paſſing it into the æſophagus; but, deviating from the right direction, it paſſed into the larynx, which was known by a ſort of guggling noiſe, and by the flame of a candle being agitated when preſented to the orifice. It was immediately withdrawn, and, at the ſecond attempt, was paſſed into the inferior part of the pharynx, and thence into the æſophagus; and we were aſſured of this from the ſame effects not taking place when

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the experiment of the candle was repeated. The inſtrument was fixed externally, by means of a ligature tied to its extremity, and the ends twiſted on two pins, and pinned to each ſide of his night-cap. Mr. Deſault, with a ſyringe, injected four ounces of a ptiſan of dog's tooth ſweetened with ſyrup of lemons, which was afterwards performed by the nurſe, being previouſly inſtructed. By this contrivance, as much broth and ptiſan as his ſituation required was exhibited without inconvenience. He was appriſed of the neceſſity of taking ſuſtenance, not by the general feelings of hunger and thirſt, but by a peculiar ſenſation of weakneſs and dragging in the epigaſtric region, which ceaſed when he had taken nouriſhment. Theſe fluids paſſed through the æſophagus into the ſtomach, without producing uneaſineſs, or exciting any diſpoſition to vomit. On the third day the fever and heat were rather conſiderable. The inſide of the mouth was filled with portions of ſloughs, which were in part detached by the conſtant application of the ſaliva and gargles. The fourth day, when ſuppuration commenced, the lacerated parts of the tongue began to ſeparate. A gargle of aq. hord. with mel. roſſ. was preſcribed. Not any nutriment, either ſolid or fluid, could be taken, as the pharynx was perfectly impervious, in conſequence of the conſiderable ſwelling that had taken place; but, as the bougie ſerved as a ſubſtitute, it was of little moment. On the ſeventh, the ſwelling had, in ſome meaſure, ſubſided, the fever leſs, the ſuppuration from the inſide of the mouth abundant, but the

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pus of a greyiſh colour and fœtid, which rendered the frequent uſe of the gargle neceſſary.

On the fifteenth, the ſwelling of the cheeks and mouth was nearly diſperſed. Mr. Deſault, who was anxious to reduce the jaw, made another ineffectual attempt. The patient daily improved, nor did the bougie occaſion the leaſt inconvenience: his ſtrength was ſupported by means of nouriſhing jellies.

From the fifteenth to the twentieth nothing remarkable occurred; the mouth was clean, and many of the ulcerated parts were cicatrized; the torn parts of the velum pendulum palati were united, but the hole in the arch of the palate ſtill remained. The farther continuance of the bougie being deemed unneceſſary, it was withdrawn: he attempted to take ſome broth, but without ſucceſs, in conſequence of the general injury the parts had ſuſtained, and their not being accuſtomed to their natural action. The patient, finding the uſe of the bougie convenient, requeſted its farther continuance: he wore it for thirty days after the accident, and even wiſhed to continue its uſe ſtill longer; but he relinquiſhed this idea, on being aſſured, that the inconveniences ariſing from leaving it off would ſoon ſubſide, and that the obſervance of ſuch a ſtrict regimen was attended with danger; beſides, the deſire of regaining his taſte and voice was another inducement. The difficulty that he experienced in deglutition for many days gradually diminiſhed; his pronunciation, at firſt, was embarraſſing and laborious; the tones of his voice, being naſal, confuſed, and with difficulty articulated. The

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fractured portions of the lower jaw were conſiderably leſs deranged than immediately after the accident, but the inequality was ſtill one-ſixth of an inch. The fractured ſurfaces of the bone not being in immediate contact, and the parts being conſtantly moiſtened with the ſaliva, were circumſtances unfavourable to the formation of callus. Another fruitleſs attempt was made for its reduction, and, at laſt, it was left to the reſources of nature. He remained at Paris one month after he had declined the uſe of the bougie, and then returned to his family with theſe diſtreſſing proofs of his raſhneſs. At this time there remained three cicatrices on his right cheek, which united at the commiſſure or junction of the lips; theſe were occaſioned by the laceration produced by the exploſion of the powder; the fractured jaw was not yet united, the parts yet admitting of ſome degree of motion; but the irregularity was now much leſs perceptible, being not more than one-twelfth of an inch, and this apparently occaſioned by the firſt dens molaris of the right ſide, that had been thrown inwards; its extraction was adviſed, with the view of the parts regaining their natural ſituation. A ſmall fiſſure was now only to be diſcerned where the hole in the arch of the palate had exiſted, and this ſeemed as if it would ſoon be effaced: he partly recovered his taſte, and, though maſtication was yet painful, he could eat ſolid food and chew even cruſts of bread. Some difficulty he experienced in ſpeaking, nor was his pronunciation diſtinct, but when he wore ſpectacles, which produced a compreſſion of the alæ of the noſe.

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The regimen and plan of treatment laid down for his obſervance he rigidly adhered to, and, previous to his departure, he waited on Mr. Deſault, to thank him for the preſervation of that life of which this accident taught him the value.

REMARKS.

THE majority of thoſe, who attempt ſuicide, are erroneouſly perſuaded that diſcharging a loaded piſtol in the mouth is the quickeſt and moſt effectual mode of deſtroying exiſtence. In oppoſition to this opinion we can adduce more than a ſolitary inſtance, and the Hôtel Dieu has already produced many. The fracture of the lower jaw affords conſiderable ſcope for reflection. — Can it be attributed ſimply to the exploſion of the powder, or to the recoil of the piſtol the inſtant it was fired off between the teeth? To which of theſe cauſes can we refer the effect? And how are we to account for the lower jaw being fractured and not the upper, and the teeth, at the ſame time, eſcaping injury? The gradual diminution of the irregular union of the fracture is a circumſtance difficult to explain,* were we not juſtified in

* We ſhould rather ſuppoſe that the diminution of the deformity was owing to the actions of the muſcles inducing abſorbtion by means of preſſure: with reſpect to the approximation of the maxillary bones, ſubſequent to the operation of the hare-lip, may it not, with more propriety, be attributed to the additional depoſition of oſſific matter, than to the action of the muſcles of the ſuperior lip?

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ſuppoſing that the deformity would be increaſed by the preſſure and conſtant action of the muſcles of the inferior lip; for, it is obſerved, that the muſcles of the ſuperior lip approximate the maxillary bones (in young ſubjects) after the operation of the hare-lip, with a fiſſure in the palate. Theſe queſtions being more curious than uſeful, we ſhall leave their diſcuſſion to thoſe who are diſpoſed to reflect on the ſubject.

The favorable termination of this caſe is certainly to be attributed to the introduction of the bougie of the elaſtic gum; for, notwithſtanding the remarkable care and attention that he received, he certainly would have ſunk under the fever and diſcharge, if we had not poſſeſſed the means of repairing that loſs, by the exhibition of proper nouriſhment. Had we not reaſon to apprehend the *primæ viæ* might be affected in conſequence of the digeſtive fluids being injured by the introduction of fœtid pus into the ſtomach, which was diſcharged from the mouth; beſides, we were acquainted with the inefficiency of nutritive clyſters.

The advantages reſulting from theſe hollow elaſtic bougies are not confined to theſe caſes, they may be advantageouſly employed in tetanos hydrophobia, ſpaſmodic contraction of the pharynx, atony and palſy of the muſcles of that part, as well as thoſe of the tongue; in caſes of tumors ſituated between the coats, or even in the paſſage of the æſophagus, and ſometimes in the cheſt; they may likewiſe be ſucceſsfully uſed in caſes of obſtruction of the reſpiratory paſſages, particularly when that obſtruction is above the bronchia, as in collections of matter in the internal part of the larynx, in

affections

affections of its cartilages, in ſome fiſtulous affections of the trachea and larynx, and in wounds of thoſe parts. In caſes where deglutition and reſpiration were obſtructed at the ſame time, they might be uſed with advantage, as in ſome ſpecies of quincy, in wounds of the neck, or when the larynx and pharynx are both divided, two bougies might be employed, and one introduced through each noſtril, and one by this means conveyed into the pharynx, and the other into the larynx.

Mr. Deſault has not yet had on opportunity of trying it in theſe complicated caſes, but propoſes to avail himſelf of the firſt that offers, nor does he think ſucceſs improbable. The eaſe with which they are introduced into the larynx, the little uneaſineſs patients have experienced when they have remained in that canal for ſome minutes, and the circumſtances of canulas being left for many days after the operation of bronchotomy, which is ſtrictly analogous, obviate thoſe objections that may be urged reſpecting the difficulty of retaining the bougie in its ſituation, in conſequence of the irritation that would be excited in that canal.*

* In a caſe of this deſcription it would be eſſentially neceſſary to diſtinguiſh the two bougies, which might be done, by tying two pieces of different coloured ribbon, and, by this contrivance, we ſhould avoid injecting into the larynx; but, if it ſhould occur, the ſurgeon would be apprized of the miſtake by the convulſive cough that the firſt few drops, that were injected, would produce: in this caſe it ſhould be immediately ſuſpended, for fear of producing fatal conſequences.

CASE

CASE II.

Fracture of the Cranium, with Depreſſion, cured without the Application of the Trepan.

[By Mr. GORRE', Surgeon to the Hôtel Dieu, at Paris.]

JOSEPH Gauthier, a native of Beſançon, aged 23, of a good conſtitution, was found, on the 17th of October, 1790, ſenſeleſs and weltering in his blood, in conſequence of a fall from a window, to which he had attempted to climb. The ſurgeon of the place, where the accident happened, bled him, and perſuaded ſome by-ſtanders, who intereſted themſelves in his favour, to take him to the Hôtel Dieu, where he was immediately carried. On his arrival, he was drowzy and ſenſeleſs, with a diſcharge of blood from his noſe, but chiefly from his left ear: his countenance was pale, his body cold, and his pulſe ſcarcely to be diſtinguiſhed.

After the head was ſhaved, a number of contuſions were perceived, but the moſt conſiderable one was ſituated towards the anterior and inferior part of the left parietal bone; it was depreſſed in the middle, accompanied with ſwelling of the ſurrounding parts. No motion or crepitus being felt on preſſure, the opinion was doubtful reſpecting the ſtate of the cranium. On farther examination, a fracture of the middle part of the left clavicle was diſcovered; it was

tranſverſe, and without the irregularity that is always occaſioned by the depreſſion of the humeral portion. An emollient cataplaſm was applied to the head, and the fractured clavicle maintained in its ſituation, by placing between the breaſt and the arm a cuſhion in the form of a wedge; the thickeſt part was applied to the axilla, and the thinneſt to the inferior part of the humerus. The arm was brought to the ſide, and retained there by a bandage paſſed round the body, which included the elbow, and ſerved as a ſupport to the arm and the humeral portion of the clavicle; while the ſternal fragment was depreſſed by means of a compreſs placed obliquely on the fractured part, and ſewed before and behind to the bandage that was paſſed round the trunk. He was put on low diet, bled, and a ptiſan of dog's tooth, with oxymel, was exhibited.

The next morning he was better: the poultice to the head continued, and he was bled in the foot. In the evening his recollection was, in ſome degree, recovered.

The third day, the ſwelling, produced by the contuſion, having ſubſided in part, we perceived a depreſſion of the cranium, with its anterior edge more elevated than the poſterior, and about 2½ inches in diameter. It was bounded, anteriorly, by the inferior part of the ſemicircular ridge of the os frontis; above, by the inferior part of the parietal bone; and, inferiorly, by the ſhelly portion of the temporal bone. The uniform ill ſucceſs of the application of the trepan in the Hôtel Dieu deterred [illegible] Default from

from performing that operation; and, in this inſtance, the omiſſion was fortunate. As the patient was weak, the repetition of the bleeding was deemed improper, and an enema was only adminiſtered. From this day he muttered a few words, and ſignified that he underſtood what was ſaid by the by-ſtanders.

The following days he articulated better, but ſtill he only anſwered by monoſyllables. The ſame treatment was continued; the fractured clavicle was going on well; the eccymoſis, that ſurrounded the fracture of the head, nearly abſorbed; and every inconvenience ſenſibly diminiſhed.

The 7th, the patient, who had hitherto been kept on diet, was now ordered ſome light food, which he eat with conſiderable appetite. The ſenſes of taſte, ſmell, and touch, were in their natural ſtate, but his ſight was weakened and his pupils dilated, particularly the left; his hearing was affected, but more ſo in the evening than in the morning.

With reſpect to his mental faculties, his memory was moſt injured; he could not even recollect the name of his country. He felt no pain, either in the fractured cranium or clavicle. The ſame treatment was continued, only the enemas omitted. On the 10th he got up, and walked in the ward. On the 14th he walked on the bridge, and continued this exerciſe every day.

On the 20th, the dreſſings from the clavicle were removed, and the bone was found perfectly united, without the leaſt deformity. His memory, hearing, and ſight, daily improved; yet his pupils were ſtill

more dilated than in their natural ſtate. The depreſſion of the cranium remained the ſame, nor did the fractured pieces of the bone appear at all elevated.

On the 27th day after the accident he was diſcharged from the hoſpital, but, previous to his departure, he went to the theatre, where the ſtudents, who attended Mr. Deſault's lectures on practical ſurgery, were perfectly ſatisfied of the depreſſed ſtate of the cranium by actual examination.

Three weeks afterwards he returned to the theatre, enjoying the moſt perfect ſtate of health; he had completely recovered the uſe of his ſenſes, and his memory was the ſame as before the accident. The pupils were nearly of their natural ſize, but the left was ſtill moſt dilated: the depreſſion was the ſame as on the day of his departure.

We mean ſoon to publiſh the caſes of three other patients, now in the Hôtel Dieu, who have had fractures of the ſame deſcription, and who have been cured without the trepan; and we ſhall again examine if the practice of trepanning is juſtifiable in all injuries of the cranium; where, from the depreſſion, or the particular nature of the fracture, the extravaſated fluids may be confined.

An Analyſis of a Courſe of Lectures on practical Surgery, by Mr. DESAULT, *at the Hôtel Dieu, on the Diſeaſes of the urinary Organs.*

PERHAPS it would be methodical, in giving theſe elements, to adopt the ſame plan as Mr. Deſault in his lectures, and, in the firſt inſtance, to give a prefatory diſcourſe on the general principles of ſurgery; but, as they are univerſally known, and are liable to many exceptions, we ſhall defer treating on this ſubject for the preſent, and begin immediately on

Affections of the urinary Organs.

The frequency of theſe diſeaſes, the negligent manner in which they have been treated by chirurgical authors, the injudicious methods generally adopted for their cure, the danger of complaints of this deſcription, the important functions of the parts injured, the difficulty attendant on their cure, and the empiriciſm to which they have been hitherto ſubject, were motives ſufficiently powerful to induce Mr. Deſault to make this ſubject the firſt object of his attention; for, when the nature of a diſeaſe is but little underſtood, we ſhould be doubly ſolicitous to communicate that information we have acquired by reaſon and

experience. Mr. Deſault divides the diſeaſes of the urinary paſſages into two parts:

1. Injuries of the ſecretory organs.
2. Injuries of the excretory paſſages.

Under the firſt claſs are ranked Diabetes, Suppreſſion of Urine and its morbid Secretion: Retention and Incontinence under the ſecond. Each of theſe, according to the number of cauſes that produce them, may be divided into different ſpecies. Mr. Deſault would willingly have declined treating on the ſubject of morbid ſecretion of urine; as, in caſes of this deſcription, ſurgery is of little uſe; but he has deemed their expoſition neceſſary, in order to point out, in one view, the diſeaſed affection of the urinary organs, and to ſuggeſt a proper plan for the ſtudy of thoſe complaints, and which may ſerve as an outline for obſervations, that, in future, may be made on this ſubject.

DIABETES.

Authors differ reſpecting the definition of diabetes; ſome include, under that name, every extraordinary evacuation of urine: but it cannot be ſaid, according to the remark of Celſus,* that a diabetes does not exiſt, except when the quantity of urine

* De Medicin. lib. IV. cap. 20.

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evacuated equals the maſs of fluids taken in, and that there is a derangement in the health.* They have alſo termed diabetes, that abundant flow of urine which occurs after a ſpaſmodic affection, originating from an acute or an inflammatory complaint; but this is only an abuſe of words, and blending the ſymptoms with the diſeaſe.

Others † have conceived that they have ſufficiently defined the diſeaſe, by obſerving, that the urine evacuated is poſſeſſed of the ſame qualities as the original fluids, when firſt received into the ſtomach. But this definition is, by no means, ſufficiently generical; for, the fluids that are drank, are not only evacuated with the urine, but likewiſe the chyle, the ſerum, the lymph, the bile, the fat, and, in fact, all the different ſecretions of the body.‡ Thoſe, who have underſtood by diabetes a diarrhæa, a urinous conſumption,§ an exceſſive flow of urine, appear, to us, to have deſcribed better its generical and diſtinct character.

The few caſes on record of this diſeaſe are proofs of the rarity of its exiſtence. The ancients mention but few: Galen relates only two, to which ſubſequent authors, in general, refer. Aretæus has particularly conſidered this ſubject; and it appears that this diſeaſe is more frequent in England than in

* Sydenham. Diſſert. epiſt. de Hyſteria.

† Ægin. lib. III. cap. 14.

‡ Galen. lib. de Criſ.

§ Aretæus de Cauſ. et Sign. Morbor. diuturnor. lib. II. cap. 2.

France.* Matthew Debſon mentions having ſeen nine patients afflicted with diabetes, Cullen twenty, and ſcarce a ſingle caſe is noticed by any French author. But is it not poſſible that this diſeaſe has been frequently miſtaken for another? And that diabetes has been confounded with incontinence of urine, particularly when in a violent degree; and which, not admitting of a remedy, are accompanied with nearly the ſame ſymptoms, ſuch as emaciation, depreſſion of ſtrength, fever, &c.? This ſuſpicion has been ſupported by the inaccurate and inattentive manner in which the diſſection of thoſe who have died of this diſeaſe has been conducted: the majority were ſatisfied with the examination of the kidneys and liver; and if no diſeaſe was found in thoſe parts, yet ſtill their reſearches were not proſecuted to the bladder; and in thoſe caſes where it has been diſſected, it has generally been found large in ſize, and ſometimes full of urine.

Diabetes has been divided into too many ſpecies. The antients mention only two, true and ſpurious: when the urine exceeded the drinks taken in, when it was † yellow white, of the nature of the chyle, purulent, and of a ſweetiſh, ſugary, taſte, &c.‡ they termed it the true diabetes; ſpurious, when the urine was crude, preſerving the nature and colour of the fluids originally drank: § they ſtill call diabetes a

* Medical Obſervations and Inquiries, tom. V.

† Cheine, Sanit. infirm. page 149.

‡ Sauvages, Noſolog. tom V. page 186.

§ Galen, Arètetée, Bartholin.

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urinous lientery. But, as in the courſe of the ſame diſeaſe, the nature and properties of this ſecretion vary materially, the diſtinction is unnatural, and only tends to confuſe the hiſtory of the complaint. The moſt methodical diviſion would be into two ſpecies, one ariſing from an alteration of the humours, and the other produced by an affection of the kidneys. A defect in aſſimilation forms the firſt claſs, relaxation and irritation of the kidneys produce the ſecond. Under the defect of aſſimilation we comprehend all the diſeaſed alteration of the humours which have hitherto been conſidered as productive of diabetes: ſuch as an exceſs of the ſerum of the blood, its too great tenuity, or its diſſolved ſtate; the feveriſh and arthritic diabetes of Sydenham, and the chyliferous and melliferous ſpecies, &c.

The quickneſs, with which the ſerum of the blood runs off by the urinary paſſages, proves that the ſtructure of thoſe glands are well adapted to produce that effect. This ſecretion is but a ſlight effort of nature, ſhe has only to filtrate the fluids, nor is it neceſſary to aſſign any other cauſe to explain this circumſtance. In a ſtate of health, by this ſecretion, the ſuperfluity of our fluids are thown off, and when they loſe their conſiſtence, and become ſo thin as to paſs off by the kidneys, it forms diabetes. Thus we regard a defect of aſſimilation as the immediate cauſe of this diſeaſe, without the neceſſity of explaining it on the principle of a diſeaſed affection of the kidneys. The perſons moſt diſpoſed to it are of a weak conſtitution and phlegmatic temperament: thoſe who drink plentifully

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of warm tepid fluids, or indulge in ſpirituous liquors: thoſe who lead a lazy and ſedentary life, or reſide in moiſt or damp ſituations, that are badly fed, living only on vegetables, particularly on pot-herbs. When the blood has been impoveriſhed by conſiderable hemorrhages, by frequent and continued bleedings, by abundant ſupuration, or by tedious diſeaſes, exacting a ſevere diet. It may be produced by metaſtaſis, and be conſequent to aſcites or hydro-thorax. The antients attributed this diſeaſe ſometimes to the cold temperature of the atmoſphere, and ſometimes to exceſs of heat in the patient. Mead ſuppoſed it originated from the liver, but, in general, it may be attributed to the enfeebled ſtate of the digeſtive organs. This particular ſpecies of diabetes can only be diſtinguiſhed in the firſt attack, for, in the more advanced ſtage, the ſymptoms are the ſame.

This diſeaſe rarely appears ſuddenly; the firſt ſymptom is generally a frequent deſire to make water. Sometimes a ſenſe of heat or cold is experienced extending from the belly to the bladder, the quantity of urine daily increaſes, and ſoon exceeds the fluids that have been drank. In the firſt ſtage of the diſeaſe the patient is weak and low, but without any ſenſe of thirſt and fever, or pain in the region of the kidneys or bladder: the urine crude, inſipid, and inodorous, and without any depoſit: the ſymptoms gradually come on, nor is much inconvenience experienced till the ſecond period of the complaint. The body, at laſt, becomes dry and emaciated, in conſequence of this conſtant and conſiderable loſs of the fluids; a ſenſe of heat in the ſkin

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and inteſtines comes on, followed by inſatiable thirſt. What is drank immediately paſſes off, and the patient expreſſes a ſtrong deſire for liquids, but an averſion to ſolid food in this ſpecies of diabetes: acid eructations often occur, digeſtion is painful, the chyle imperfectly formed and combined with the drink, and, in that ſtate, paſſes off with the urine. The natural properties of this ſcretion change; ſometimes it is yellow, ſometimes inclining to white, and reſembling a ſolution of honey in water, of a ſweet and ſugary taſte, with a weak urinous ſmell, and depoſiting a greyiſh matter ſufficiently conſiſtent; the inſenſible perſpiration being checked, the ſkin becomes rough and ſcaly, and the general emaciation of the ſyſtem perceptibly increaſes. If the urine does not regularly paſs off, the abdomen ſwells, but ſubſides, immediately as ſoon as they take their natural courſe. The pulſe becomes ſmall, irregular, and intermittent, and, at length, thoſe afflicted with this diſeaſe become perfectly exhauſted. All the ſymptoms of maraſmus take place, and, the vaſcular ſyſtem not containing ſufficient for the ſupport of circulation, death takes place.

Diabetes is more or leſs dangerous according to the cauſe, the duration of the complaint, the age and conſtitution of the patient: when it attacks thoſe who are old and worn out with infirmity, if the diſeaſe is inveterate, and the ſecretions in a diſolved ſtate, there is little hope for a cure. Wintringham ſays, he never ſucceeded in curing the true diabetes. Cullen, who has ſeen a conſiderable number of caſes, ſays, that Scotland cannot produce a ſingle inſtance of ſucceſs.

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However, Van Swieten, Harris, &c. mention many: the indications of cure are two; firſt, to give conſiſtence to the humours, and, ſecondly, to prevent their determination to the kidneys. To fulfil the firſt we ſhould preſcribe incraſſants and reſtoratives, ſuch as a decoction of rice, barley, gum-dragon, gum-arabic, or of hartſhorn-ſhavings, to which ſometimes aromatics might be added, ſuch as cinnamon, nutmeg, and acidulated with a few drops of vitriolic acid, or rabel water. We may try milk, alum whey, mineral waters, with vitriolic acid, a ſtrong decoction of quinquina. We ſhould, however, regulate our choice of remedies by the particular nature of the diſeaſed functions. Exceſs of drinking and aqueous fluids ſhould be avoided, as they will tend to produce ſtill greater weakneſs. Abſtinence, in this particular, ſhould, as much as poſſible, be attended to; and, if the diſtreſſing ſenſation of thirſt could be reſiſted, dry medicines ſhould be preſcribed: but there is a queſtion, that the danger of the diſeaſe may be increaſed by not repairing, by the uſe of plentiful drinks, the loſs occaſioned by the abundant flow of urine. There is no way of preventing a determination of humours towards the kidneys, but by inviting them to another part. Some have endeavoured to produce this revulſion from the ſtomach and inteſtines, and have employed vomits and draſtic purges. Their exhibition is by no means indifferent; for, if they do not ſerve, they do conſiderable miſchief, by injuring the digeſtive organs. The inconvenience is not experienced, by producing a revulſion to the ſkin. The analogy that exiſts

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between the ſecretions of urine and perſpiration, and the facility and quickneſs with which they vary in a ſtate of health, render this plan preferable. From the exhibition of diaphoretics, little advantage is be expected: they act rather as diuretics than on the ſkin, and weaken the urinary organs, already too much enfeebled by the immoderate flow of urine. Friction, inducing perſpiration by the uſe of flannel or a fleſh-bruſh, is efficacious and unattended with danger. Theſe means will be conſiderably aſſiſted by the uſe of fomentations with warm water, which produce a relaxation of the ſkin, and are exempt from the inconvenience of the warm bath, which increaſes the general weakneſs. He ſhould reſide in a warm dry atmoſphere, and be cautious of expoſing himſelf to the cold air: and, if the ſtrength will admit of the exertion, he ſhould walk till a perſpiration is excited. A liberal uſe of red wine may be allowed in the firſt ſtage of the diſeaſe, and when the heat and fever are moderate. In the more advanced periods of the complaint, ſolid and dry food ſhould be recommended, particularly farinaceous ſubſtances: but the taſte of the patient and the ſtrength of his digeſtive powers ſhould be particularly attended to. When the diſeaſe has reached its laſt ſtage, we can only aſſuage the the thirſt of the patient by acidulated drinks, and wait till nature puts a period to his miſery.

Of Diabetes produced by a Relaxation of the Kidneys.

A relaxed ſtate of the veſſels of the kidneys is more frequently the effect than the cauſe of diabetes; but they are ſometimes originally affected, either by a defect in organization, or by the abuſe of aqueous drink, or the long-continued uſe of diuretics. Retention of urine gradually obſtructs the fluids in the capillary veſſels of the kidneys; and, from this cauſe, they become extremely diſtended from the habit of ſleeping in warm and ſoft beds. There is a ſpecies of diabetes, which takes place from a partial or total deſtruction of the kidneys themſelves, and has been attributed to relaxation; but may we not queſtion the exiſtence of this ſpecies of the diſeaſe? Ruyſch, it is true, adduces one example. He ſays he diſcovered, in a ſubject that died of diabetes, the right kidney entirely deſtroyed, and the bladder amply diſtended. But this inſtance is by no means concluſive; he ſpeaks only like an anatomiſt, and juſt mentions the diſeaſe without deſcribing a ſingle pathognomonic ſymptom; and it is probable, that, independant of this diſeaſed ſtate of the parts, met with in the diſſection, he had no farther acquaintance with the diſeaſe, but what he acquired from uncertain accounts of the caſe. It is only the antecedent ſymptoms which enable us to diſtinguiſh whether diabetes ariſes from relaxation or a defect of aſſimilation; in both caſes, no pain is experienced

rienced in the lumbar region; but, when the ſecretions are healthy and the relaxation is local, then the digeſtive organs are unimpaired, and, in conſequence, the patients experience the ſenſations of hunger and thirſt without the power of completely gratifying them, and of courſe their ſtrength is kept up, and their fever and heat increaſed.

It is in the commencement of this diſeaſe, that aſtringents ſhould be chiefly employed; as alum, whey, quinquina, and rhubarb. The moſt irritating diuretics have been recommended; ſuch as the tincture of cantharides, with vitriolic acid,* the doſe from 15 to 40 drops, three times a day, applications of bodies rendered cold by immerſion in ice, compreſſes moiſtened with vinegar or oxycrat, applied to the lumbar region, are the moſt efficacious means of reſtoring the tone of the kidneys; but they ſhould be continued for a long time. Van Swieten ſays he did not ſucceed till he had perſiſted in the remedy more than ſix months.

Diabetes from Irritation of the Kidneys.

The fluids always flow towards an irritated part: to the kidneys, for example, when thoſe glands become irritated, occaſioning a more copious ſecretion, and

* Edinburgh Medical Obſervations, vol. iv. page 626. In the internal uſe of any preparation of cantharides, we ſhall never loſe ſight of its poiſonous qualities; and, in the very worſe caſes, the doſe of half a grain ſhould be rarely exceeded.

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ſometimes conſequent diabetes. The abuſe of warm diuretics, gravel or ſmall ſtones in the kidneys, a gouty, itchy, dartrous, or rheumatic, affection of thoſe glands. Metaſtaſis, the external application or the internal exhibition of cantharides, and indulgence in venereal pleaſures, are ſo many cauſes that tend to produce diabetes. Beſides the ſymptoms that have been mentioned in this ſpecies of diſeaſe, the patient is attacked with an acute pain in the region of the kidneys, a ſymptom that does not occur in other ſpecies of diabetes.

TREATMENT.

We muſt attend to the irritating cauſe: if it ariſes from the uſe of warm diuretics, we muſt uſe the warm bath, decoctions of linſeed, marſhmallows, and dog's tooth, &c. and endeavour to invite the gouty humour to the ſkin by the applications of ſinapiſms to the feet; and the pſoric humour ſhould be attended to, by ſuffering the patient again to imbibe the diſeaſe. If theſe means are not ſufficient, we ſhould determine the point of irritation to another part, by the uſe of the cauſtic or ſeton, or by the application of a bliſter; but not compoſed of cantharides. Cupping, ſcarifications, and cataplaſms, repeatedly applied to the ſame region, may contribute to remove the irritating cauſe, and then cure the diſeaſe.

I have only mentioned theſe different ſpecies of diabetes to point out the bounds of our knowledge of this diſeaſe. The ſubject is new, the field for hypotheſis extenſive,

extenſive, and the cauſe of ſcience is ſerved by engaging practitioners to communicate the fruits of their obſervation and experience, and it is only from collecting numerous facts we can acquire any certain principles for the treatment of this diſeaſe.

Extraction of a Stone, ſtopt at the Inſertion of the Ureter in the Bladder, by Mr. Deſault.

[The Caſe related by Mr. MANOURY, Surgeon to the Hôtel Dieu.]

MARY Margaret Remiers, a native of Pont-Chary, in Brie, aged 62, of a good conſtitution and ſanguineous temperament, about three years ſince, was attacked with a violent and fixed pain in the right lumbar region, which continued for a conſiderable time, but afterwards moved lower, and, according to the expreſſion of the patient, deſcended a little every day.

Theſe pains ceaſed entirely for a month, at the expiration of which they were renewed, but confined to the bladder and meatus urinarius. This ſecond attack was accompanied with frequent deſire to make water: the urine, conſtantly ſlimy, became now frequently bloody, and the ſtream, which ſometimes ſuddenly ſtopt, flowed again when ſhe varied

her poſition or walked a few ſteps. After eight months continued pain, ſhe was attacked for three following days with a conſiderable diſcharge of bloody urine, followed with a complete ſuppreſſion, which laſted 24 hours, when it came away with difficulty, drop by drop, and was attended with excruciating agony. Frightened by theſe ſymptoms, ſhe was induced to ſubmit to an examination, which for a long time ſhe had rejected, from the modeſty natural to her ſex. By the introduction of a ſound, a ſtone of the ſize of a hazel-nut was diſcovered, and inſtantly extracted with a pair of common forceps.

This woman for ſome months enjoyed the moſt perfect health, but at laſt her old pains were renewed in the courſe of the ureter and in the region of the right kidney. She was admitted into the Hôtel Dieu, on the 1ſt of September, 1788. At this time her pains were continual, and confined to the internal part of the bladder; her ſymptoms increaſed by exerciſe, and produced a frequent deſire to make water, but the urine was not bloody as before, nor did it paſs in an interrupted ſtream. By the introduction of a ſound in the bladder, Mr. Deſault diſcovered a ſtone at the lower part, which he conceived was ſmall. The general health of the patient being good, previous preparation was deemed unneceſſary, and, in conſequence, the operation was performed five days after her admiſſion in the Hoſpital. She was placed on the couch appropriated for the operation of lithotomy in the men, and confined exactly in the ſame ſituation: two aſſiſtants ſeparated the labia and nymphæ:

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the ſurgeon introduced a ſtaff into the bladder, to be reaſſured of the preſence of a ſtone, then gave to the handle of the inſtrument a direction perpendicular to the axis of the body, inclining it a little towards the left groin, and applied its concave part under the ſymphiſis pubis. He then introduced, in the groove of the ſtaff, (which was now inclined to the right,) the beak of Mr. Hawkins's improved gorget, the edge of which was inclined to the left ſide and downwards, and, whilſt it was paſſed along the groove, the handle was ſlightly depreſſed, by which means he avoided wounding the bottom and the left ſide of the bladder with the cutting edge of the gorget. The inciſion was then proſecuted obliquely in the poſterior and left part of the urethra, and neck of the bladder: he withdrew the ſtaff, and, with his right fore finger placed on the gorget, paſſed it gently into the bladder; the forceps was then introduced, and, in withdrawing the gorget, he formed a kind of ſemicircle round the forceps, from the left to the right, to avoid wounding the ſurrounding parts. The ſtone was felt a ſecond time, but could not be graſped: a ſubſtance of a moderate ſize was felt at the extremity of the forceps, in that part of the bladder where the ſtone was firſt diſcovered, without experiencing that peculiar ſenſation which reſults from an inſtrument coming in contact with a bare ſtone: after ſome fruitleſs attempts he withdrew the forceps, paſſed his fore finger a ſecond time into the bladder, and, in the room of a ſtone, a tumour was felt, which yielded eaſily to the preſſure of the finger. At the moment ſome doubts were enter-

tained of its nature, it might be a fungus of the bladder, a concreted matter in the coats of that viſcus, or an extraneous ſubſtance in the vagina, but the laſt conjecture was ſoon removed, by the introduction of the left fore finger in the vagina. Mr. Deſault was perfectly ſatisfied that he felt a ſtone in the part that the tumour occupied, and that it was ſituated about the termination of the ureter. He began to ſuſpect that the ſtone was engaged in that part where it enters the bladder obliquely, and that it was ſurrounded by the tunics of the bladder. He was convinced this was the caſe, by paſſing the end of his finger over the ſurface of the tumour, when he felt at its inferior part a ſmall hard body, inveſted with membranous folds. Theſe circumſtances were confirmed by many ſurgeons who aſſiſted at the operation, and had introduced their fingers into the bladder. Mr. Deſault, having divided in different circumſtances membranous bands high up in the rectum, and in other deep-ſeated cavities, by means of the inſtrument, the engraving of which is annexed, conceived that it might be ſucceſsfully uſed in this inſtance. The fore and middle fingers of the right hand were placed in the rings of the inſtrument, and the thumb on the ſhank: he conveyed it ſhut into the bladder, along the fore finger of the left hand, then retracted the blade ſufficiently to leave the ſemicircular notch of the inſtrument perfectly free, and, by means of the finger, placed this notch on the ſurface of the tumour: then puſhing the blade gently forward, he at once divided that part of the ureter and bladder, which inveſted the ſtone; this being finiſhed, the

in-

inſtrument was withdrawn, and with his finger, which ſerved him as a conductor, it was diſengaged, and was afterwards eaſily extracted by means of a pair of common forceps. The time of the operation was prolonged in conſequence of waiting for an inſtrument, which, before its commencement, there was no probability of wanting. The pain of the operation ſhe ſuſtained with courage and fortitude. She was put on low diet, and preſcribed a light decoction of dog's tooth and linſeed, ſweetened with ſyrup of marſhmallows. She paſſed the next day and night well, complaining only of a ſmarting ſenſation, produced by the paſſage of urine, which paſſed away involuntarily, and drop by drop. The next day there was a heat in the ſkin and a frequency in the pulſe; the belly neither tender nor painful. The third day, the patient feeling herſelf well, and not apprehending any farther ill conſequences, took ſome ſolid food, which ſhe procured clandeſtinely. The fourth day, ſhe was ſtill better; and now finding no inconvenience from ſolid nutriment, ſhe eat ſtill more liberally. The fifth day, there was ſome fever, the tongue dry, and the belly painful and tender. She was bled at the arm: two enemas adminiſtered in the courſe of the day, and was ordered to drink plentifully of veal broth and decoction of dog's tooth, which ſhe took alternately. The ſixth day, ſhe was more calm; the fever, heat, dryneſs of the tongue, and the pain in the belly, were abated. The urine ſtill came away involuntarily, but without much ſmarting. The eighth day, ſhe had no fever, and the belly was eaſy;

ſhe was able to retain half a wine-glaſs of urine, and, on the 9th, a full glaſs. Some light food was now permitted. On the 10th, the urine paſſed away voluntarily. The quantity of nouriſhment was now gradually increaſed. This woman remained in the hoſpital twenty days after the operation, and could either retain or paſs her urine at pleaſure.

REFLECTIONS.

Though women are much leſs ſubject to the ſtone than men; yet not a year paſſes, but many are cut in the Hôtel Dieu. We have ſeen, ſucceſſively, in this hoſpital, two modes of performing the operation in women. Formerly, the method of dilating the urethra and the neck of the bladder was the uniform practice: but, ſince Mr. Deſault has been the chief ſurgeon, he always prefers inciſion. With a view that practitioners might decide which of theſe two methods was preferable, a repreſentation has been made of the reſult of all the caſes that have been operated on theſe laſt ten years, and it was found, that the inconveniences that patients experienced, ſubſequent to the operation by dilation, never took place after inciſion. By inciſion, leſs pain is experienced, and the time of the operation is ſhortened.

The ſituation of the meatus urinarius on the vagina, and the proximity of the pudendal artery, ſuggeſted an apprehenſion that they might be divided by

by the cutting edge of the inſtrument; but, by an attentive examination of the anatomy of the parts, it is found, that the urethra may be divided between the branch of the pubis and the vagina, without penetrating that canal or opening the artery. We ſhall not ſtop here to compare the operation, by inciſion of the urethra, with the ſmall apparatus ſuch as propoſed by Celſus, or with the hypogaſtric ſection, revived, in modern times, by Frere Coſme. There is no one, converſant in the dangers and difficulties attendant on theſe two operations, can heſitate in their choice; nor, ſhould either of them be had recourſe to, but in circumſtances of abſolute neceſſity.

It is unneceſſary to enter into a detail of thoſe inſtruments adapted ſolely for women: theſe we reject as unneceſſary; for, the inſtruments, employed for men, can be uſed with equal advantage, and, by ſimplifying our practice, we make one ſtep towards improving the art.

In the Hôtel Dieu the ſame ſtaff and inſtruments are employed in both ſexes; ſometimes we uſe the ſimple, and ſometimes the concealed biſtoury, and moſt generally Hawkins's gorget, on account of the ſimplicity of its conſtruction, and the certainty with which we are enabled to make the inciſion; but it ſhould be narrower for women than men: for, in men, not only the urethra and the neck of the bladder, but a portion of the proſtrate gland, is to be divided. The gorget which Mr. Deſault uſes for adult women is $\frac{1}{2}$ & $\frac{1}{12}$ of an inch wide at the termination of its edge. This ſurgeon has improved Mr. Hawkins's gorget by

preſerving only a ſlight degree of curvature. By this improvement, and inclining the ſtaff, the urethra and the neck of the bladder may be divided in the ſame direction as with another inſtrument. As the caſe of a man, operated on with this inſtrument, will be publiſhed ſoon, in one of the journals, a more particular and accurate detail of the proceſs of the operation, and the advantages of the improved ſtate of the inſtrument, will be deferred till that period, when a plate will be given.

The circumſtance of a ſtone being ſtopped at the inſertion of the ureter in the bladder, in women, is a ſingular caſe; nor are we acquainted with any inſtance but the one related; yet, by their organization, they are certainly equally ſubject to its exiſtence as men, who have met with the like diſpoſition; inſtances of which are mentioned by Franco,* Littre,† and Le Dran,‡ who are by no means ſufficiently clear reſpecting the manner of extracting the ſtone.

Littre adviſes that part of the ureter and bladder, which inveſts the ſtone, ſhould be worn out by friction, produced by frequent introduction of the ſtaff, or that the covering ſhould be torn by the forceps, by gentle and repeated endeavours. The ſimple relation of theſe plans are ſufficient to prove their inſufficiency. Le Dran has had recourſe to emollient injections, but the ſtone could not be extracted till they had been continued for

* Traité des Hernies, C. 31.

† Mem. Acad. des Sciences, A. 1702.

‡ Académie de Chirurgie, tom I.

two

two months: this method is uncertain in the event, and, from the ſtone being left in the bladder, leaves the patient in a ſtate of the moſt anxious ſuſpence.

Houſtet,* in his memoir on encyſted tumours, ſays, that the method of cutting, employed by Fourbert, explains the method of diſengaging the ſtone; it may be preſumed that Houſtet, in quoting Fourbert's method, only meant to point out the place where the external inciſion ſhould be made; for, according to his idea, the cavity of the bladder is not penetrated, and only the parts that immediately inveſt the ſtone are divided: the operation, thus performed, approaches nearer the ſmall apparatus than Fourbert's method; but, whatever it may be, the uncertainty of being able to cut, preciſely, on the place where the ſtone is ſituated, the difficulty and danger of wounding parts ſo deeply ſeated, will render this operation highly imprudent to perform: the conduct of Garangeot, in a ſimilar caſe, is more worthy of imitation; the ſtone was encyſted in a pouch or cell, ſituated at the anterior part of the bladder: after its ſituation was aſcertained, by the introduction of the finger into the bladder, he cut off, with a biſtoury, that portion of the ſac that contained the ſtone, and diſengaged it eaſily; but, although Mr. Garangeot was ſucceſsful, the inciſion with the biſtoury is ſubject to great inconvenience; it is difficult to cut, with this inſtrument, a rough and irregular ſurface; and, as ſtones are generally round, there is danger of their ſlipping and piercing the

* Académie de Chirurgie, tom I.

bladder.

bladder. Mr. Deſault's inſtrument, which he calls his *kiotome*, *coupeur de luette*, or *coupe-bride*, from the uſes to which it may be applied, is not open to the ſame objections. No injury can be received from its point, as the blade is concealed, nor can any part be divided but what the ſurgeon may wiſh. If the inciſion ſhould not be completed at firſt, the blade may be withdrawn, the ſemicircular notch of the inſtrument puſhed more forward, and the inciſion proſecuted to any extent; this inſtrument was invented for the expreſs purpoſe of dividing membranous bands in the rectum, but it has ſince been employed, with the greateſt ſucceſs, in the exciſion of the tonſils, and in taking off fungi, and other excreſcences ſituated in cavities; the blade is ſo contrived, that, when it paſſes through the ſemicircular notch, it firmly fixes the parts that are to be divided, which cannot be done with either the ſciſſars or biſtoury, as moveable parts are apt to recede, and render the ſection difficult. If the part we mean to inciſe is too large to be contained in the notch of the inſtrument, after the diviſion of one portion, we may proceed to another, and the operation may be in this manner completed.

EXPLA-

EXPLANATION OF PLATE I.

FIG. I. KIOTOME, a *coupe-bride*, or *kyſtitome*, with a lateral notch.

AB. A ſilver ſheath which receives the blade.

v v. Rings ſoldered to the ſheath.

y. A portion of the blade which remains naked in the lateral notch, *x y z.*

AT. A ſteel ſhank or handle continued from the blade.

C. A ring at the extremity of the ſhank.

B C. The total length of the inſtrument, which is nine inches.

FIG. II. The ſheath of the kiotome ſeparated from the blade.

x y z. The ſemicircular notch, 9 lines in diameter.

AB. Length of the ſheath, 6 inches 4 lines; width, near the rings, 8 lines; near the ſemicircular notch 7 lines.

Diſtance from the extremity *B* to the beginning of the ſemicircular notch *x*, 7 lines.

FIG. III.

FIG. III. The ſteel blade of the kibotome, out of its ſheath.

sE, *sD*. The blunt ſides of the blade, thinner than the middle.

DE. Sloping edge 10 lines in length, forming the Angle *DEs* of 35 deg.

ss. The projecting part of the handle, to prevent the blade being puſhed too forward in the ſheath.

ssT. Length of the ſhank, 18 lines.

ssE. Length of the blade, 6 inches 1 line.

Width of the blade near the ſhank 7 lines and half, in the middle 7 lines, near the edge 6 lines and half.

It is neceſſary to obſerve, that the French foot contains 13 Engliſh inches, and that each inch is divided into 12 lines. The meaſure of the annexed engraving is calculated by the French foot.

FRACTURES

FRACTURES

OF THE

OLECRANON.

OBSERVATION I.

JOHN Baptiſt Nicolas, a native of Paris, 45 years of age, of a bilious temperament and ſtrong conſtitution, was admitted into the Hôtel Dieu the 10th Nov. 1790.

Mr. Deſault examined the patient in bed, and, although he was perfectly ſatisfied of the exiſtence of the fracture of the olecranon, he had him conducted to the theatre and re-examined, for the improvement of the ſtudents, to afford them a perſonal opportunity of remarking the characteriſtic diſtinctions of this ſpecies of fracture. The patient ſaid, that ſix hours ſince he fell on his right elbow, that he felt an acute pain in the part, and, from that inſtant, was incapable of extending the fore-arm, and, on attempting it, he felt as if ſomething were detached from the elbow. The fore-arm was half bent, accompanied with conſiderable ſwelling and echymoſis round the elbow. The olecranon was drawn up higher than the con-

dyles

dyles of the humerus, when, from the poſition of the arm, its ſituation ſhould have been neceſſarily lower.

We were convinced of the juſtice of this remark, by placing the other arm preciſely in the ſame poſition: between the fractured end of the ulna and the olecranon there was a depreſſion ſufficiently large to admit the finger, which was much more perceptible on increaſing the flexion of the fore-arm: when the triceps muſcle was in a ſtate of contraction it diminiſhed, and almoſt diſappeared by extending the fore-arm, and, conſequently, producing a ſtate of inaction in that muſcle, the olecranon admitted of ſome degree of motion without changing the ſituation of the ulna. No doubt remaining of the fracture of the olecranon, it was reduced and retained in its ſituation in the following manner. Whilſt two aſſiſtants extended the fore-arm, one turn of a ſingle headed roller, of four or five ells length and three fingers breadth, moiſtened with aq. veg. was applied round the inferior part, and continued over the whole fore-arm even to the articulation. The fractured olecranon was drawn down towards the ulna; whilſt the ſkin was drawn upward, by an aſſiſtant, to prevent it from being wrinkled; for, when this was omitted, folds were apt to form between the diſunited parts, and prove rather an impediment to the reunion. When the finger was removed, by the preſſure of which the olecranon had been puſhed againſt the cubitus, it was retained in its ſituation by a turn of the roller, which was paſſed from the ſuperior and anterior part of the fore-arm above the elbow, then

paſſed

paſſed on the inſide, and reflected back again to the anterior part of the fore-arm, forming a bandage, in the ſhape of a figure of eight, ſimilar to what is uſed in bleeding. The bandage was continued as high as the ſuperior part of the arm, where it was fixed by a circular turn: a ſtrong ſplint was then applied to the whole length of the arm and fore-arm, but a little bent at the articulation to prevent the complete extenſion of the fore-arm, by which means the end of the fractured ulna would be forced into the cavity of the olecranon, and puſhed more forward than the other fragment; conſequently, the union would be irregular.* This ſplint was retained with the

* Theſe inconveniences, ariſing from keeping the arm completely extended, we have not yet had opportunities of obſerving. The ſubject of fractures of the olecranon and patella have been, by the generality of authors, very inaccurately treated. The public are indebted to Mr. Sheldon, the preſent Profeſſor of Anatomy to the Royal Academy, for an ingenious eſſay on this ſubject; and, in the year 1782, my friend Mr. Haighton, Lecturer on Phyſiology at Guy's Hoſpital, wrote ſome remarks on this ſpecies of fracture, which are ſubjoined to two caſes publiſhed in the 9th vol. of the Medical Commentaries, p. 382: in the firſt caſe, the uſe of the arm was perfectly reſtored by the obſervance of an extended poſition; and in the other, from its being kept in a ſtate of flexion, its uſe was entirely loſt. As theſe remarks are written with clearneſs and perſpicuity, we conceive that the quotation will be highly acceptable to our readers.

"In the preceding caſes, we have an opportunity of ob-
" ſerving very different effects to ariſe from the ſame kind of ac-
" cident,

the remainder of the roller, and the limb placed on a cuſhion, in ſuch a way that the preſſure ſhould be every

" cident, according to the particular treatment made uſe of " in each.

" In the firſt, the patient is able to perform all the motions " to which the arm is appropriated: in the laſt, it is exceedingly " limited, and attended with a total incapacity to ſtretch the " elbow.

" If we conſider the mechaniſm of the joint, with the attach- " ment of the muſcles by which it is moved, we ſhall find theſe " phænomena admit of a very ſimple and eaſy ſolution. The " elbow is a joint admitting of flexion and extenſion, (pronation " and ſupination I ſhall paſs over, as having little connection with " the preſent caſe,) for which purpoſes the rounded and pulley- " like extremity of the os humeri is received, and moves in a " correſponding cavity of the ulna, called *ſigmoid*. The two pro- " ceſſes, by which this cavity is in ſome degree formed, are its " anterior, called *coronoid*, and its poſterior, called *olecranon*. In " order the better to regulate the degree of flexion and extenſion, " there are two cavities ſituated at the inferior extremity of the " os humeri; one on the anterior, the other on the poſterior " ſurface: into theſe the two proceſſes of the ulna are occaſionally " received. When the joint is in its greateſt degree of flexion, " the coronoid proceſs is received into the anterior cavity or " foſſa; and, when in the greateſt degree of extenſion, the ex- " tremity of the olecranon occupies the poſterior foſſa.

" In order to communicate motion to this arrangement of " parts, muſcles are ſituated in various directions; but the muſ- " cle by which extenſion is chiefly performed, (the triceps exten- " ſor cubiti,) being inſerted into the extremity of the olecranon, " has an attachment peculiarly advantageous and mechanical, as " it is thereby at ſome diſtance from the centre of motion, con- " ſequently leſs exertion will be neceſſary to accompliſh ex- " tenſion.

" When

every where equal. Two days after, the bandage became looſe: in conſequence of the abatement of the ſwelling and ecchymoſis, it was re-applied, and repeated frequently during the courſe of the treatment. Three weeks after the accident, though the fracture appeared united and firm, it was kept extended for two days, with only a few turns of the roller paſſed

" When by any accident this proceſs is broken off, two very " important changes are induced upon the part. Firſt, the lever " that enabled the muſcle to act ſo advantageouſly is removed. " Secondly, the ſpace in which the muſcle acted is now ſhortened. " Hence that bony arrangement that was before ſo favourable to " motion is now deſtroyed, and the muſcle, by whoſe agency " this effect was produced, has its influence exceedingly limited, " at leaſt for a conſiderable time; and even admitting time to " accommodate itſelf to act in the new and ſhortened ſpace, " as well as to become obedient to the impulſe of the will, ſtill " the ſtate of the bone will continue an inſuperable impediment.

" *Note.* The anconæus aſſiſts in extending the arm; but, being " inſerted below the olecranon, is not importantly concerned in the " preſent caſe.

" Theſe conſiderations naturally lead to a judicious and ſucceſs- " ful practice, the rational intention being to reſtore the parts to " their natural ſituation, and to preſerve them in it. To accom- " pliſh theſe ends, we have to conſider what that poſition of the " arm is, that ſuffers the two extreme points of the muſcle to " approach the neareſt; or, in other words, what poſition re- " laxes the extenſor muſcle in the greateſt poſſible degree? The " extended one is indiſputably that poſition, conſequently every " judicious ſurgeon will pay due attention to this in practice; and, " by the aid of a bandage applied from above downward, with " other mechanical means tending to keep the fragments in ap- " poſition, and as near contact as poſſible, he will have every " reaſon to hope for and expect ſucceſs."

round the articulation: every kind of bandage was then left off, the motions of flexion and extenſion were performed and gradually increaſed in degree till the thirty-fifth day after the accident, when the patient was examined by many of the ſtudents, who were not able to diſcover the leaſt deformity, or even the trace of a fracture, and he recovered the uſe of his arm as perfectly as before the accident.

OBSERVATION II.

[By Mr. CHORIN, Surgeon to the Hôtel Dieu.]

Mary Dufour, a waſher-woman, reſident at Neuilly, near Paris, about 32 years of age, of a ſanguineous temperament and good conſtitution, as ſhe was carrying a heavy burthen, fell and fractured her elbow: ſhe was admitted into the Hôtel Dieu, 4th Dec. 1789. Two days after the accident, though the parts were ſwelled, and ſhe was rather fat, we diſtinguiſhed eaſily it was a fracture of the olecranon, by the characteriſtic diſtinctions mentioned in the preceding caſe. It was reduced and treated preciſely in the ſame manner, the pain and ſymptoms ſoon ceaſed, and ſhe was allowed ſolid food the next day. On the fifth day, the hand was ſlightly ſwelled, but, by looſening the bandage, in two days it ſubſided. On the twenty-fourth, the reunion was complete and the dreſſings left off. The rigidity of the fore-arm, wriſt,

and

and fingers, ſoon ſubſided by exerciſe, and, on the thirtieth day, ſhe was brought to the Theatre and diſmiſſed, as perfectly cured as the ſubject of the preceding caſe.

OBSERVATION III.

[By Mr. CHORIN.]

On the 7th of Nov. 1790, Margaret Lagarde, a native of Paris, 73 years of age, ſlipped from the ſecond ſtair of a ſtaircaſe, and fractured her elbow. Three days after the accident ſhe was viſited by a ſurgeon, who attended only to the ſwelling and ecchymoſis that ſurrounded the fore-arm: he contented himſelf with applying a poultice, without regarding the elbow, to which the patient referred as the immediate ſeat of the pain. Eight days after, the ſwelling ſubſided, but the pain in the elbow ſtill remained. Mr. Deſault examined the patient, and directly diſcovered that the olecranon was fractured, and ſeparated about half an inch from the ulna: the treatment of the caſe was the ſame as in the preceding, and although the fragment could not be brought in perfect contact, from the length of time that had elapſed, yet the union completely took place by the twenty-eighth day, and the groove between the divided parts of the bone could ſcarcely be diſtinguiſhed. The rigidity of the fore-arm, wriſt,

and fingers, that had been rendered ſtill more conſiderable by the ſwelling, ſoon yielded to exerciſe, and, on the forty-ſixth day after the reduction, the motions of theſe parts were completely reſtored.

The ancients have tranſmitted nothing on fractures of the olecranon, unleſs we admit with Dalechamps in the paſſage of Paulus Ægnetus, "Cubitus frangitur . . . circà partem ad cubiti gibbum."* The moderns, and even Petit himſelf, have not diſtinguiſhed this from other fractures of the ulna. The majority of practitioners, miſled by a falſe theory, and perſuaded that loſs of motion was neceſſarily conſequent to all fractures, connected with the articulations, did not even attempt its reduction; they kept the arm in a ſling in a flex poſition, that the anchyloſis might be as little inconvenient as poſſible; and what tended to confirm them in their error, was, that the powers of extenſion were totally loſt by the obſervance of the extended poſition, and the muſcles remaining for ſuch a length of time in a ſtate of inaction.

Duverney is the firſt who has propoſed a methodical treatment for this accident.† This fracture, he ſays, is to be diſtinguiſhed by the circumſtance of the fractured portion being drawn up by the actions of the extenſor muſcles, and the impoſſibility of moving the fore-arm, which reſts hanging by the

* De Re Medica, lib. VI. cap. 100.

† Mal. des Os, tom. 1. page 325.

ſide

ſide of the body: to reduce it, he extends the fore-arm, and, by the aſſiſtance of his thumbs, puſhes down the proceſs of the olecranon, and retains it in this ſituation by means of a thick and ſtrait compreſs, placed above the fracture; over that a circular compreſs, and a bandage, ſomewhat ſimilar to what is uſed in bleeding; then the limb, ſlightly bent, was placed on a pillow, and, at the expiration of a few days, he tried to avoid an anchyloſis by gentle and repeated motion.

Mr. David* attributes the anchyloſis, which is often conſequent to the fracture of the olecranon, to the ignorance of the ſurgeon. Reſt and extenſion he thinks eſſentially neceſſary to the re-union; but as ſoon as this has taken place, which is generally about the 25th day, he recommends the arm to be gently moved, and to be increaſed in degree every day: he obſerves, that, if too much extended, the extremity of the ulna will be forced in, and the union will be imperfect or the motion difficult.

The ſubject of fractures of the olecranon has, certainly, not yet been diſcuſſed with ſufficient accuracy to direct the practice of young practitioners, part only of the characteriſtic diſtinctions are to be found; and Duverney's method is ſubject to many inconveniences; his compreſſes, bandages, &c. may eaſily be diſplaced; beſides, he applies nothing to prevent the flexion of the fore-arm: and, if the bandage is too looſe, the olecranon will not be retained in its

* Diſſert. ſur les Effets du Mouvement, &c. page 63 et ſuiv.

ſituation; and, if too tight, much ſwelling will be induced.

This expoſition will be ſufficient to enable our readers to judge of the progreſs of ſurgery in the treatment of theſe accidents, and we are happy in the communication of any remarks that may tend to throw light on ſo intereſting a branch of practice.

Of Suppreſſion of Urine.

Moſt* authors have confounded ſuppreſſion of urine with retention, and have deſcribed them both under the generical name of iſchuria. Some have, however, admitted of two ſpecies; one true, and the other ſpurious: by the true iſchuria they mean when the urine is contained in the bladder; ſpurious, when it does not flow into that viſcus; but, by this deſcription, we do not acquire a juſt idea of this diſeaſe, as the urine may be ſtopped in the ureters, and flow out by a fiſtulous orifice, and ſtill the ſecretion go on, as uſual, in the kindeys. It is important, however, that theſe diſtinctions ſhould be carefully attended to; for, the methods we ſhould adopt to excite ſecretion would be frequently contrary to thoſe we might employ for the re-eſtabliſhment of excretion. It

* A very able treatiſe, on the diſeaſes of the urinary paſſages, has been written by Wm Rutty, M. D. being the Gulſtonian Lecture, read at the Theatre of the Royal College of Phyſicians, London, in the year 1726.

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would be leſs exceptionable if we were to define ſuppreſſion of urine, a diſeaſe conſequent to a want of ſecretion in the kidneys; and retention, a complaint occaſioned by the urine being obſtructed in ſome of the excretory paſſages.

A ſuppreſſion may be either total or partial: total, when no ſecretion takes place; and partial, when that ſecretion is not ſufficient for the preſervation of health. Suppreſſion of urine ſometimes takes place in the commencement of an acute inflammatory fever, or on the acceſs of nervous hyſterical hypochondriacal affections, in paroxyſms of the gout, &c. but we do not mean to conſider the diſeaſe under this point of view; for, in all theſe caſes, except ſome examples we ſhall mention, this ſuppreſſion ceaſes with the diſeaſe, being purely ſymptomatic, and its degree is influenced by the force and duration of the original complaint. An idiopathic ſuppreſſion of urine is a rare caſe. It is not ſufficient, that the ſecretion of urine ſhould be ſtopped in one of the kidneys, but both muſt be affected at the ſame time to form this complaint. It is true, that the affinity and conformity of ſtructure of theſe two glands render their diſeaſes frequently common to both; but diſſection has ſatisfactorily proved, that an affection of one will not neceſſarily affect the other. Among the numerous cauſes of ſuppreſſion of urine, we ſhall omit thoſe that have no connection with the urinary paſſages, and which do not, abſolutely, imply a derangement of thoſe organs: ſuch as plethora, a thickened ſtate of the blood, exceſſive ſalivations,

profuſe ſweats, obſtinate diarrhœas, and dropſy, and thoſe diſeaſes where there is a deficiency of ſeroſity; and treat only of thoſe that immediately influence the kidneys and impede their functions. Among theſe cauſes we ſhall comprehend obſtructions to the courſe of the blood in the kidneys, or in the ureters, &c. occaſioned by blood, mucus, pus, gravel, or ſtones, inflammation, gangrene, ſuppuration, induration, ſpaſm, atony, &c. But, whatever may be the cauſe of ſuppreſſion, ſtill there is a ſufficient number of ſymptoms to diſtinguiſh one from the other: in general the patients experience but little deſire to make water; and, when they do, little or no urine is evacuated; no tumour is felt in the hypogaſtric region, and, when the catheter is paſſed into the bladder, little or no urine is diſcharged; pain, more or leſs acute, is felt in the lumbar region, they complain of a bad taſte in the mouth, with a urinous ſmell, they are afflicted with nauſea, hiccup, and vomiting; and what is diſcharged, and, in fact, all the excretions of the body, exhale a urinous odour. If the diſeaſe does not give way, a difficulty of reſpiration frequently comes on; ſometimes, they are attacked with coma, convulſions, delirium, &c. The prognoſtic ſhould be unfavourable, in conſequence of diſorders induced in the animal œconomy by the retention of matters that ought to be evacuated by urine. The kidneys, from their ſituation and ſtructure, when they become diſeaſed, often produce a fatal termination. The aqueous part of the urine is only ſeparated by the kidneys, nor have we any evacuation of the ſalts, earth, and other

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ſubſtances contained in that ſecretion. A turgeſcence and acrimony in our fluids are the inevitable conſequence which give origin to a number of dreadful ſymptoms, ſuch as urinous œdema, gangrene, dropſy, ardent fever, conſumption, &c. it is true, that occaſionally theſe ſymptoms are either prevented or retarded by the exertions of nature, who carries off parts of the urine by other emunctories, as the ſkin, the ears, the noſtrils, the mouth, the breaſts, and the anus. Theſe are but indifferent ſubſtitutes for the kidneys; they will admit the evacuation of the more watry parts of the urine, whilſt the others remain, and their retention produces a number of ſymptoms which, though ſlow in progreſs, are not leſs formidable in their effect. We have ſeen caſes where patients have not ſunk under this diſeaſe for one or more years; but generally it terminates fatally in fifteen or twenty days, or, at moſt, in a month. No general indication of cure can be offered for ſuppreſſion of urine; its treatment can be only relative; diuretics and many pretended ſpecifics have been exhibited; their action is often regulated by the preſent diſpoſition of the diſeaſed parts, and frequently medicines of contrary, and even oppoſite, properties are ſucceſsfully given in the ſame diſeaſe when the cauſe is different: it is only then by referring to each individual cauſe we can point out any rational indications of cure.

The firſt cauſe is an obſtruction to the paſſage of the blood in the emulgent veins or arteries. A ligature on theſe veſſels, in living animals, leaves no doubt

doubt of the effect produced for want of circulation. All animals, ſubmitted to this experiment, have had ſuppreſſions of urine and urinous vomitings. The cauſe, as exiſting in man, has not been proved by actual obſervation, but it cannot be denied, that an aneuriſm, or any tumour, ſituated in the courſe of theſe veſſels, might produce, by their compreſſion, the effect of a ligature. Aneuriſms of theſe veſſels we ſhould ſuppoſe rarely exiſt, as, in the number of ſubjects ſubmitted to diſſection, we do not recollect a ſingle inſtance; but ſtill, if we conſider the ſize of the emulgents, and the force with which the blood is propelled into them by the action of the aorta, it is difficult to conceive that the tumour would be adequate, by its preſſure, to prevent the influx of the blood; it is more probable that the compreſſing maſs would be elevated by each contraction of the heart, and give free paſſage to the blood, or that a depreſſion or ſulcus might be formed in the tumour by the conſtant pulſation of the veſſel; and, by this means, it would be perfectly free from preſſure. But it is very different, with reſpect to the veins: from the thinneſs of their coats they are leſs reſiſtant, and, in conſequence of the ſlowneſs of the blood's circulation and its impulſe being weak, they are more influenced by compreſſion: the blood, being retained in the veins, cannot flow into the arteries, in conſequence of the ſtagnation of the blood.

Fortunately theſe caſes are rare, perhaps only exiſt in theory; and, unleſs theſe tumours were ſufficiently large to be felt under the parietes of the abdomen, there

there is no ſymptom by which we can poſitively aſcertain their exiſtence, and, even if it were poſſible, we have very few indications of cure, and the means employed muſt have reference to its particular nature.

If the obſtruction to the courſe of the blood ſhould be in the kidneys, it is moſt probable in the minute ramifications, not in the trunks of the emulgent arteries or veins; the capillaries may be obſtructed by the too great thickneſs of the blood, a caſe to which weak and plethoric habits are particularly ſubject. The too great diſtention of the veſſels impede their contraction, and hence ariſes a languid circulation: if, in this ſituation of the patient, there ſhould be too great a determination of blood to the kidneys, conſequent to inflammation excited by a blow, or by the abuſe of ſpirituous liquors, or by violent exerciſe; theſe may act as cauſes tending to produce a ſwelling and obſtruction in the kidneys, which will prevent the ſecretion. This ſpecies of ſuppreſſion generally comes on ſuddenly; it is ſometimes preceded by crude and limped urine, which diminiſhes by degrees. We cannot be deceived in the ſymptoms of this diſeaſe; the patient does not complain of pain, but only a ſenſe of weight and laſſitude in the lumbar region, without fever. This ſuppreſſion is not dangerous, and yields eaſily to bleeding and diluting liquors. Bleeding is always advantageous, and ſometimes produces miraculous effects. Patients have even ſaid, that during the operation of bleeding, they have felt the urine flow from the kidneys

neys into the bladder, and that immediately afterwards they felt a violent deſire to make water. If this ſuppreſſion does not go off, it will be followed by inflamation of the kidneys. After the ſuppreſſion produced by the obſtruction of the blood in their capillary veſſels, an obſtruction ariſes in conſequence of coagulated blood in the ſecretory veſſels. Bloody urine, which precedes this ſpecies of ſuppreſſion, is one of the pathognomonic ſymptoms. If the diſcharge is abundant, and exiſts for many days previous to the ſuppreſſion, the countenance will be pale, the pulſe ſmall and intermittent, and every ſymptom will occur conſequent to a conſiderable loſs of blood. There is little pain in the lumbar region, unleſs the ſuppreſſion ariſes from a blow or a fall; in this caſe the pain is conſiderable, but ſtill it is more confined to the muſcles of the loins than to the kidneys. If the diſcharge of bloody urine ſhould continue, and the patient will bear evacuation; bleeding, &c. ſhould be had recourſe to: our indications are then to dilute the coagula and procure its evacuation; at firſt, plenty of diluting fluids ſhould be drank, and then gentle aperients might be exhibited: give, for example, a ptiſan of the root of ſtrawberry-plants, reſt. harrow. and caltrop. ſharpened by a few grains of nitre, and their effects ſeconded by the application of emollient fomentations to the lumbar region: reſt is adviſeable, as exerciſe might tend to reproduce the diſcharge of bloody urine. Though its natural courſe may be re-eſtabliſhed, ſome clots of blood may remain in the urinous canal, and form a nucleus for a

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ſtone; for we know, by experience, how eaſily theſe concretions form, in conſequence of the precipitation of calcareous earth, when any of theſe extraneous ſubſtances are met with in the urinary paſſages.

Obſtructions in the ſecretory parts of the kidneys by inſpiſſated mucus cannot be ſupported by abſolute fact, but yet it is admitted by many authors, who cannot deny the poſſibility of its exiſtence; but ſtill we ſhall not pretend to relate the ſymptoms which diſtinctly mark this cauſe, as they are vague, uncertain, and not to be depended on.

Pus in the kidneys, &c. adduced as a courſe of obſtruction, is liable to the ſame doubt, nor can it be ſatisfactorily proved.

That a ſuppreſſion may be produced by pus in the kidneys is not to be denied, but ſtill it is not by obſtruction in their canals, but by their deſtruction, or by being compreſſed above the ſphere of their action; but, whether the idea is true or falſe, pus, in theſe canals, may be conſequent to metaſtaſis, or produced by inflammation of the viſcera, or by tranſuding through the coats of the veſſels.

Thus we ſee a uniform ſecretion tranſmitted through the internal membrane of the noſe, and the urethra, after the exiſtence of inflammation. But even admitting the preſence of pus in the kidneys by metaſtaſis, we do not ſee how the ſecretory ducts can be obſtructed; if the conſiſtence was thick it could not paſs theſe minute veſſels, but would mix with the blood; but, to paſs by the urinary ducts, it muſt poſſeſs the ſame tenuity, &c. as that ſecretion.

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The commemorative ſymptoms only can indicate this ſpecies of ſuppreſſion: in the firſt caſe, it ſhould be preceded by inflammation of the kidneys; in the ſecond, by the ſudden diſappearance of ſuppuration in ſome other part of the body, and the pus, which would be remarked in the urine previous to the ſuppreſſion.

We can place more reliance on the effects of diluting remedies. Purges and vomits have alſo been recommended; theſe laſt are ſaid to be peculiarly uſeful in procuring the expulſion by the agitation produced in the viſcera of the lower belly.

Obſtruction of the urinary ducts is difficult to explain. We have known inſtances of patients voiding worms by urine, and they have been frequently diſcovered in the bladder, but their actual exiſtence in the kidneys is difficult to prove, although Zacutus, Luſitanus, Hollier, and ſome others, poſitively aſſert they have ſeen them, but probably they were deceived by ſome filaments of coagulated blood, having a vermi-form appearance, or theſe worms were generated after death, and produced by putrefaction.

The moſt frequent and ſerious cauſes of ſuppreſſion of urine are ſtones and gravel in the kidneys; other cauſes are, for the moſt part, conjectural. Numerous diſſertations have explained this derangement in the natural functions, but moſt unfortunately they throw no light on the treatment of the diſeaſe. The effects of art are inadequate to its cure; and, at preſent, we are obliged to abandon it to the reſources

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of nature, and to leave to future generations the diſcovery of a more rational method.

Inflammation of the kidneys is generally accompanied with ſuppreſſion, and the inflammation of one kidney is very apt to extend to the other, and, by this means, influence both.

Independent of general cauſes, the kidneys are ſubject to be affected by particular ſpecies of inflammation, diuretics, the internal exhibition or external application of cantharides, ſtones in the kidneys, long retention of the urine in the bladder, or in the ureters, or even in the kidneys themſelves, or, in ſhort, any circumſtance that will excite an increaſed determination of blood will produce inflammation of theſe parts.

When the kidneys are inflamed, the urine is ſometimes ſuddenly and ſometimes gradually ſuppreſſed, nor does it take place totally till towards the third or fourth day. Under theſe circumſtances the urine is at firſt pale and limpid, then red; the patient experiences a frequent deſire to make water, accompanied with ardor urinæ, ſharp and pulſatory pains in the lumbar region, which, though conſtant, increaſe more towards evening than morning, ſtronger in inſpiration than expiration, and are increaſed by the efforts of making water, by riding, by lying on the oppoſite ſide to the ſeat of the diſeaſe, by coughing, &c. but the pain is not increaſed, as in the lumbago, by preſſure on the lumbar region, or by bending and extending the trunk. One circumſtance particularly marks this ſpecies of pain, namely, its propagation

pagation along the courſe of the ureters to the bladder and to the glans penis; it extends even to the teſticles themſelves, cauſes them to contract, and is often accompanied with a ſenſe of numbneſs in the groin and the anterior part of the thigh. When theſe pains become violent, the pulſe is generally hard, frequent, and full, the fever ardent, the belly painful, particularly on preſſure; ſometimes it is ſoft and ſometimes hard and diſtended; conſtipation of the bowels comes on with flatus, accompanied with hiccups, nauſea, vomiting, and the inſenſible perſpiration exhales a urinous odour.

Inflammation of the kidneys, like all other inflammations, may terminate in reſolution, ſuppuration, gangrene, or ſchirrus. Our curative intentions ſhould be directed to the firſt by an obſervance of a plan ſtrictly antiphlogiſtic, bleeding, which ſhould be repeated according to the ſtrength of the patient and the violence of the ſymptoms, leeches ſhould be applied to the verge of the arms, warm baths, emollient clyſters, fomentations, cupping-glaſſes to the lumbar region, refreſhing and relaxing drinks, emulſions, whey, decoctions of linſeed, marſh-mallows, and dog's tooth, with a few grains of nitre diſſolved.

When there is reaſon to expect reſolution, it happens generally on the ſeventh day from the invaſion of the diſeaſe: it is preceded by the gradual diminution of the ſymptoms, the ſenſe of heat in the kidneys diminiſhes, the pain is leſs, the pulſe ſoft, leſs frequent, and more regular, the urine is diſcharged as uſual, inſtead of being aqueous or of a

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red colour, they become turbid, and precipitate a plentiful and puriform ſediment at the bottom of the veſſel.

If the ſeventh day paſſes without an attack of fever, the pain, and other ſymptoms of inflammation, ſenſibly diminiſh, and ſuppuration or gangrene of the kidneys is to be feared. We ſhould expect that the heat, pain, and inflammation, of the kidneys, muſt neceſſarily diminiſh after the proceſs of ſuppuration and the ſymptoms of fever; but ſtill, after ſome days, they return with increaſed violence, with a ſenſe of weight, tenſion, and pulling-in the part; and the ſtiffneſs and numbneſs in the groin, and the anterior part of the thighs, increaſes and changes into violent pain.

The matter in the kidneys is more or leſs extenſive in its effects: ſometimes they are entirely deſtroyed, ſometimes only a part; but, in either caſe, the pus may be evacuated in different ways; by urine, or the inteſtinum colon may be pierced, and it may be evacuated by ſtool;* or a tumour may be formed in

* The evacuation of a conſiderable quantity of matter by ſtool may be, perhaps, difficult ſatisfactorily to explain: it might, certainly, ariſe from the ulcerative proceſs taking place between the kidney and the colon, and ſurrounding adheſive inflammation ariſing between that inteſtine and the kidney, by which means the pus would not be extravaſated in the cavity of the abdomen, but would paſs readily into the colon, and thence to the rectum. Diſſection has afforded inſtances, in ſome degree analogous, where this proceſs has appeared to take place between the gall-bladder

in the loins, which may break ſpontaneouſly. We are apprized of the burſting of the abſceſs by the courſe of urine being eſtabliſhed, and being mixed with pus, and ſometimes ſmall portions of coagulated blood are to be diſcovered, which have been detached from the kidney by ſuppuration; and there is left in the kidneys an ulcerated pouch, which remains to be deterged and healed. To anſwer this indication, the balſamic juices are much praiſed, ſuch as the balſams of Copaiba, Peru, and Mecca; and turpentine in very ſmall doſes; lime and mineral waters have been alſo recommended, but theſe will not agree in all caſes; for, by their ſtimulating qualities, they are apt to induce a diſpoſition to conſumption. The uſe of new cow or aſſes' milk, hydromel or barley water, are not liable to the ſame objections, and will ſerve to correct the acrimony of the urine as well as nouriſh the patient. Even if one kidney ſhould be deſtroyed by ſuppuration, a cure may be effected; for, in ſubjects that have been ſubmitted to diſſection, a thick membranous ſubſtance has often been diſcovered inſtead of a kidney.

When pus pierces the colon, it is known by its evacuation by ſtool, and the ſudden diſappearance of the ſymptoms: mild drink and clyſters ſlightly deterſive are the means we may employ; and, though

and the duodenum, by which means gall-ſtones, of a conſiderable ſize, have paſſed directly into that inteſtine, without paſſing the ductus communis choledicus.

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the caſe is certainly attended with great danger, yet it ſometimes admits of a natural cure.

If, to the ſymptoms of inflammation and ſuppuration, there ſhould ſucceed a tumour in the lumbar region, it is difficult to judge of its nature: for this reaſon it has been recommended not to defer the opening, for fear the pus ſhould be vitiated, and be effuſed in the cavity of the pelvis, inſtead of ſhewing a diſpoſition to break externally: but, perhaps, this idea is carried too far; for, we have had more than one opportunity of remarking, that nature ſeems diſpoſed, in collections of matter in the lower belly, to evacuate it externally, by the formation of a tumour, which, if not opened, no internal effuſion is to be apprehended; for, ſooner or later, it will be brought to the ſurface: but we do not mean to ſay, that the practice of deferring the opening of theſe tumours is to be advanced as a general precept, for it would be neceſſary to adduce a number of facts to ſupport this as a univerſal rule.

Our practice ſhould be cautious and deliberate: for ſome days, we might content ourſelves with the application of emollient cataplaſms, and, when it is neceſſary to open the tumour, we ſhould make our inciſion from above downwards, and through its whole length: if the hemorrhage ſhould be conſiderable enough to weaken the patient, we muſt tie the veſſels; but, as the branches of the lumbar arteries are generally ſmall, the application of lint dipt in colophony, with compreſſes and a bandage, will be ſufficient. The wound ſhould afterwards be dreſſed

with lint dipt in linimentum arcæi, applied to the bottom of the abſceſs, and the lips kept ſeparated by a doſſil of lint dipt in the ſame application, and an emollient poultice applied over the whole. It is neceſſary to keep the orifice open, and to heal the wound from the bottom: it is not always in our power to heal theſe wounds without fiſtulous orifices, through which the urine paſſes, but fortunately they are not dangerous. A number of caſes have happened of this deſcription, where the life of the patient was tolerably comfortable, and prolonged to its ordinary period, but we muſt be attentive to keep theſe fiſtulous orifices open to prevent a retention, which might be done by the introduction of a canula of the elaſtic gum, with a thread tied round the extremity, and covered with a diacylon plaſter: it is neceſſary to ſound theſe fiſtulæ occaſionally, as their continuance may be occaſioned by a ſtone in the kidneys, or in the courſe of the fiſtula: their extraction is generally eaſy; the mode will be mentioned when we treat on the extraction of extraneous bodies: but when the pus is diffuſed in the cellular ſubſtance, along the courſe of the ureters, into the cavity of the pelvis, death is inevitable; but ſtill there is a probability that the pus may paſs under the peritoneum, and form a tumour in the groin, or at Poupart's ligament; but the rarity of theſe caſes leave us little to hope.

The interference of art by opening theſe tumors may be uſeful, but it is beſt to leave them to the efforts of nature; for we learn by experience, that the

the practice of opening these species of tumours is generally fatal, unless we reach the seat of the suppuration. The pus changes in colour and consistence, fever comes on, and the patient sinks in a few days.* But, in general, there is less to be apprehended when the matter remains where it was originally formed; this fluid may be absorbed and passed off, by urine, by stool, or by the insensible perspiration. We may presume this effect has taken place, when the symptoms consequent to inflamation and suppuration suddenly disappear. If the patient is sufficiently strong, the regimen need not be altered; but, if exhausted by the discharge, recourse should be had to cordials, diaphoretics, &c. and the cure terminated by gentle and repeated purges, properly regulated. Schirrus of the kidneys is not always the result of inflammation, it is often subsequent to chronic affections of different kinds. These glands sometimes grow to an enormous size, they have been even known to fill up the cavity of the lower belly:‡ they are sometimes soft, and contain hydatids, or sacs containing urine or pus: sometimes they are hard and schirrus, and, in these last cases, suppression takes place by degrees; and, if one kidney should only be affected, no difference is observed in the secretion of urine; nor is the disease indicated by any positive symptom, either of pain,

* The sudden translation of matter from these abscesses does not always prove fatal, unless the metastasis should effect the brains, lungs, or liver.

‡ Journal des Savants, 1678.

fever,

fever, or heat, in the region of the kidneys: except when the ſwelling is conſiderable, and the tumor large, then there is ſome pain and a ſenſe of weight in the part: the anterior branches of the firſt pair of lumbar nerves are compreſſed, and a numbneſs is felt in the groin and in the anterior parts of the thigh; and, it ſometimes increaſes to ſuch a degree, as to prevent the patient from walking. This induration of the kidneys is rarely curable, and is often followed by dropſy and aſcites. But if the caſe is recent, and the patient young, there is a proſpect of recovery. The cure ſhould be attempted by aperient diuretics and reſolvents. If one kidney ſhould be only affected, the patient may live a long time without much inconvenience. When the kidney becomes grangrenous, it is always fatal: at firſt, the violence of the ſymptoms are mitigated, and the patient is more eaſy; but the ſuppreſſion ſtill continues, accompanied with cold urinous ſweats, the pulſe ſmall and intermittent, the countenance livid, and, in ſhort, all the ſymptoms of approaching death. A ſuppreſſion of urine may ariſe from ſpaſm and palſy of the kidneys. The functions of theſe viſcera, like all other ſecretory organs, depend on a peculiar ſpecies of irritability, called vital energy, which gives that tone to the vaſcular ſyſtem that is neceſſary to circulation and ſecretion. If this energy is too much ſtimulated, there reſults an exceſs of action in the veſſels, and a ſpaſmodic contraction, which is unfavourable to the admiſſion of fluids in the ſmall ſecretory veſſels. If this energy

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is too weak, and ceaſes to act as in the palſy, no reaction takes place, nor are the fluids admitted into thoſe veſſels where ſecretion is performed. Spaſm of the kidneys, may be occaſioned by rheumatic, pſoric, and dartrous, affections of thoſe parts, from the paſſions of the mind, anger, melancholy, and fear; it may take place in tetanos, in nervous fevers, more particularly in hyſteria; but then this ſpaſm of the kidneys is only conſequent to univerſal ſpaſm; and, as we have before-obſerved, this ſuppreſſion laſts no longer than the original diſeaſe, of which it is only ſymptomatic, and generally terminates in a few days; but there have been inſtances in hyſterical affections, of ſuppreſſions of urine laſting forty days.*

Suppreſſion of urine from ſpaſm often takes place ſuddenly, the pulſe is hard, and pain is experienced in the lumbar region.

Diuretics, relaxants, bleeding, warm bathing, and cataplaſms to the loins, will ſometimes cure this ſuppreſſion. If the ſpaſm ſhould ariſe from any particular acrid humour of the kidneys, we ſhould have recourſe to the cautery, ſeton, and the application of moxa to the lumbar region. Palſy of the kidneys may be the conſequence of old age, free living, abuſe of diuretics, frequent retentions of urine, occaſioning diſtentions of the urinary ducts. When ſuppreſſion is occaſioned by a palſy of the kidneys, it comes on gradually, the urine is limpid and inodorous, with no fever, heat, or pain, in the lumbar region. Tonic

* Acad. des Sciences, 1715. Acta Eruditorum, Nov. 1726.

remedies

remedies are here particularly indicated. In a general palsy, mineral waters, bark, and warm diuretics, may be given with success; but, for a paralytic affection of the kidneys, there is no particular indication of cure.

Extract from a Memoir of Mr. Desault, on the Luxation of the inferior Extremity of the Radius, read at a Meeting of the Academy of Surgery in 1777.

MR. Desault proposes, in this memoir, to prove satisfactorily the possibility of this dislocation of the radius, and to support it by facts; for no authors, who have hitherto treated on the diseases of the bones, have mentioned this species of derangement. If we consider the nature of the articulation of the two bones of the fore arm as connected together, we see that superiorly in the motions of pronation, and supination, the ulna rests immoveable on its axis. It admits of slight flexion and extension, the edge of the head of the radius turns in the sigmoid cavity of the ulna, without separating from that cavity. The ligaments of this articulation rarely admit of distension; and, for this reason, this dislocation rarely happens. But, luxations of the inferior extremity, from its greater extent of motion, and the comparative weakness of the articulation and ligaments, more frequently occur;

occur: beſides, in the motion of pronation, the head of the ulna, without turning, is carried backwards* by the ſlight extenſion of that bone, and gets rather behind the ſigmoid cavity of the radius; whilſt this bone, turning on its axis from behind forward, is puſhed before the head of the ulna: the anterior part of the capſular ligament is then relaxed, whilſt the poſterior becomes ſtretched in that part where the luxation is diſpoſed to take place. In the motions of ſupination, the reſpective changes of the radius and the ulna are preciſely the reverſe, viz. the head of the ulna is carried forwards, without revolving; and the inferior part of the radius is carried backwards, and turns on its axis the ſame as before.

The capſular ligament is relaxed poſteriorly, and is ſtretched on that ſide where the head of the ulna is puſhed before the ſigmoid cavity of the radius: the manner in which the articulation is formed of the inferior extremity of the bones of the fore-arm, and the changes occaſioned by their ſudden motions, render this part ſubject to luxation; which will take place, if, from the convulſive actions of the muſcles, or by the application of external force, its motions are unnaturally extended: in this caſe, the radius will be diſunited from the connection of the articulation with the ulna, and will be puſhed more for-

* Mr. Deſault, in this deſcription, ſuppoſes the patient in an erect poſture, the arms in the direction of the trunk, and the palms of the hand turned forward.

ward in a ſtate of pronation, and more backward in a ſtate of ſupination. Diſſection has proved that the preceding remarks are well founded, and they are farther confirmed by obſervations on the living ſubject.

Observation I.

In a ſubject brought to the Theatre for diſſection, Mr. Deſault obſerved that both the ſhoulders were diſlocated forward, there was a mal-conformation of the fore-arm, and neither that or the hand would admit of complete extenſion; the motions of pronation and ſupination were very limited: on the inferior part of the fore-arm a hard eminence was obſerved, and a depreſſion on the oppoſite ſide. Theſe preternatural appearances induced Mr. Deſault to diſſect the parts with conſiderable attention: the hand was œdematous, the flexor tendons were puſhed outwards and adhered to the ſkin, the ſigmoid cavity of the radius was filled with cellular ſubſtance, inſtead of cartilage, which naturally ſurrounds it; the articular ligament, which is between the ulna and the os pyramidale,* ſcarce touched more than the head of the ulna, and had followed the radius backwards. The head of the ulna was ſituated before the ſigmoid cavity of the radius, and reſted on one of the oſſa ſeſamoidea, to which it was attached by capſular ligament.

* The French ſometimes give this name to the os trapezoides. Vide Dict. Raiſonné d'Anatomie et de Phyſiologie, page 274.

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As Mr. Deſault was unacquainted with the hiſtory of the caſe during life, the cauſes of theſe appearances could not be explained; but, nevertheleſs, the radius could not have been carried backwards, but by a force adequate to produce the motion of ſupination. This conjecture appears feaſible by the following experiment:

Having laid bare the bones of the fore-arm of many ſubjects, every time that the inferior extremity of the radius was carried backwards, and that this motion was forced in a ſtate of ſupination, the capſular ligament broke anteriorly, and the head of the ulna paſſed through the aperture, and was ſituated before the radius: but, when the fore-arm was moved forwards, and pronation produced, the radius was carried before the ulna, and the capſular ligament, tearing poſteriorly, admitted the head of this bone to ſlip out of its ſituation.

Theſe experiments and remarks leave no doubt on the nature and poſſibility of the luxation of the inferior extremity of the radius, but they afford nothing but conjecture on the cauſes, ſymptoms, and modes of cure: this information is to be acquired only by obſervation on the living ſubject.

Observation II.

Mr. Deſault was ſent for to a child of 5 years of age, who was ſuppoſed to have fractured her arm. He was informed, by the parents, that, when in bed,

a young man playing with her arm, by uſing too much violence, ſuddenly performed the motion of pronation; the effort was accompanied with ſome noiſe, and produced conſiderable pain throughout the whole arm, but chiefly along the poſterior part of the fore-arm. When Mr. Deſault was called, there was little ſwelling; the arm was at ſome diſtance from the trunk, and carried a little forwards, and the fore-arm half bent between pronation and ſupination. At the inferior and poſterior part, there was a tumour formed by the head of the ulna, carried behind the ſigmoid cavity of the radius;* the hand was a little extended, and in a ſtate of adduction. The patient kept the arm conſtantly in this ſituation, as it was the leaſt painful; and, as ſoon as it was touched or the poſition altered, great pain was experienced.

From former obſervations, Mr. Deſault immediately knew that the radius was diſlocated forwards; and it was ſo obvious, that it was remarked by three pupils who were with Mr. Deſault. It was reduced in the following manner:

An aſſiſtant, having kept the arm fixed, he held, with both hands, the inferior extremity of the fore-arm: one hand embraced the inſide, and the other the outſide, of the arm; and the thumbs were placed in the intervening ſpace between the radius and the ulna, and the fingers poſteriorly: the intention was

* Vide Traité complet d'Anatomie, par M. Sabatier, tom i. page 185.

to

to ſeparate the two bones of the fore-arm and bring them on a level, whilſt an effort was made to bring the arm in a ſtate of ſupination, and in a direction contrary to the force which produced the diſlocation: the attempt ſucceeded; for the bones, being but ſlightly ſeparated, were eaſily replaced: the pain ceaſed immediately, the limb reſumed its uſual appearance, and every motion was performed as well as before the accident. To prevent conſequent ſwelling, &c. compreſſes, dipt in camp. ſpt. and a ſlight bandage were applied, nor did any unpleaſant ſymptoms occur during the cure.

Observation III.

About five months afterwards, an infant of two years old was brought to Mr. Deſault, who had met with a ſimilar accident, but from an unknown cauſe. The reduction was effected in the ſame manner, but with more eaſe: the ſame plan of treatment was adopted, and attended with the ſame ſucceſs.

Observation IV.

A waterman, 40 years of age, in attempting to ſtop a boat, held faſt by a rope that was faſtened round a poſt: by the exertion, though not violent, the arm was turned into a ſtate of pronation. He

immediately felt an acute pain, which extended to the ſhoulder, and which was increaſed by the motions of pronation and ſupination. The ſurgeon, who was firſt called, did not take it for a diſlocation of the radius forwards; he miſtook it for a ſprain, and treated it accordingly for three months; but, notwithſtanding the attentions he received, the pain continued and the ſwelling was conſiderable. At this period Mr. Deſault ſaw him; the arm was then half bent, between pronation and ſupination, and the head of the ulna projected conſiderably backwards: ſome endeavours, notwithſtanding the ſwelling, were made for the reduction; but, as they were not ſucceſsful, the attention was directed to the treatment of the ſwelling, which, in eight days, nearly ſubſided.

During this interval, he was ſeen by many practitioners, moſt of whom recommended him to deſiſt from the application of any remedy, as it would ſubſide in time: this advice was followed, and he declined all aſſiſtance from art, at the moment when there was every proſpect of ſucceſs. He returned home, where he remained in the ſame ſtate, with ſcarcely the uſe of his hand.

At the time Mr. Deſault wrote this memoir he was young in the practice of ſurgery; but, at preſent, he is enabled to add many caſes to confirm the truth contained in theſe obſervations.

Observation V.

The firſt patient that Mr. Deſault ſaw at the Hôtel Dieu, as ſurgeon in chief, had a luxation forwards of the inferior extremity of the radius. This caſe had been miſconceived; and, although it had taken place longer than the other, it was eaſily reduced, which was, probably, owing to the ſwelling being reduced by the emollient cataplaſms that had been continually applied on the wriſt, to which the difficulty of motion had been attributed. But, though the reduction was eaſy, there was conſiderable difficulty in retaining the parts. We ſucceeded by fixing the arm in a ſtate of ſupination, and applying a thick compreſs behind the ulna, whilſt the radius was puſhed backwards by another compreſs placed at its anterior part, and both preſerved in this ſituation by means of a roller. Theſe dreſſings were continued for a month, after which the reduced bones were preſerved in their natural ſituation.

The patient, at firſt, was cautious in moving his wriſt, particularly avoiding the motion of pronation; but which he regained by degrees.

Observation VI.

On the 29th of January, 1789, Madeleine Fuſer, a waſher-woman, aged 34 years, luxated the inferior

extremity of the radius forwards, whilſt ſhe was wringing a ſheet; another woman, who was aſſiſting her, made a violent effort, and, with a jerk, twiſted her right fore-arm, which was in a complete ſtate of pronation. She experienced inſtantly a very acute pain, and felt as if ſomething was torn. Conceiving it only a ſprain, which would ſoon get well, ſhe uſed no topical application, nor applied to the Hôtel Dieu till the 16th day after the accident. There was then a little ſwelling at the inferior part of the radius and wriſt, which was in a ſtate of extenſion and adduction, the fingers were bent; little inconvenience was felt when the hand was in a ſtate of inaction, but, on motion, the pain was extremely violent.

It was obvious that the radius was ſituated before the ulna, and that they rode over each other. The manner of reduction was the ſame as in the other caſes. Whilſt an aſſiſtant ſupported the elbow, another held the hand; the ſurgeon ſupported the inferior part of the fore-arm with both his hands, he placed one hand on the outſide and the other on the inſide, with his thumbs between the intervening ſpace of the radius and ulna; and, during the endeavour to ſeparate the bones, he deſired the aſſiſtant, who held the hand, to perform the motion of ſupination, a direction which he gave himſelf to the radius.

The reduction was accompanied with a peculiar noiſe; and, from the limb reſuming its natural ſhape, and regaining its freedom of motion, we knew our endeavours had ſucceeded. Compreſſes of aq. veg.

min.

min. were applied to the wriſt. The patient remained a fortnight at the hoſpital, at the end of which ſhe regained the perfect uſe of her wriſt and hand.

We ſhall not adduce any more caſes of this ſpecies of diſlocation, but remain ſatisfied with thoſe already produced, as they are ſufficient to point out the nature, cauſes, and ſymptoms, of this luxation of the inferior extremity of the radius. We ſee that the reduction, in the firſt inſtance, is eaſy, and that no ill conſequence inſues; but, if this diſlocation eſcapes the notice of the ſurgeon, or it has taken place for a conſiderable time, we cannot always ſucceed in our attempt, as was the caſe in the waterman, in the 4th obſervation; but ſtill we ſhould not deſpair, even if it has taken place for ſome months. The ſucceſs of the laſt caſe ought to encourage our attempts for reduction, whatever time may have elapſed ſince the luxation.

Wound of the Head, with Ecopé, that terminated fatally.

[By Mr. BOUDRYE, Surgeon to the Hôtel Dieu.]

STEPHEN Marriotte, a native of Gien-ſur-Loire, thirty-two years old, and of a good conſtitution, on the 25th December, 1790, received, on the left ſide of the os frontis, a wound with a ſabre, which

which divided perpendicularly the ſoft parts and a portion of the external table of the bone. He was brought the ſame day to the Hôtel Dieu, without experiencing any inconvenience from his wound. A pledget, dipt in the linimentum arcæi, was applied, and a poultice over the whole; he was bled, and an antiphlogiſtic regimen obſerved till the fourth day.

On the fifth, ſuppuration took place, the wound not painful, appetite good, and the patient experienced no inconvenience whatever: he walked the greateſt part of the day. The following days paſſed in the ſame way; but, on the evening of the fifteenth, the ſkin was dry, the pulſe raiſed, the edges of the wound ſwelled, the ſuppuration yellow, and diminiſhed in quantity. Theſe ſymptoms increaſed the following evening; and the next day the pain in the head was conſiderable, particularly on the left ſide, the ſuppuration totally ſuppreſſed, the pulſe hard, and the tongue dry and furred.

Mr. Deſault ordered him to be bled in the foot, and a bliſter to be applied over the whole head; but the patient, objecting to the total loſs of his hair, would only admit of its application at the anterior part. A grain of tartar emetic was exhibited, which acted as a purge as well as a vomit. The ſymptoms ſeemed to be mitigated; but, towards night, he grew worſe; and, on the next day, which was the ſeventeenth from the accident, he was ſenſeleſs and paralytic on the left ſide. He was bled a ſecond time in the foot, but, the ſymptoms ſtill continuing, he expired on the eighteenth day.

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The body was opened publicly in the Theatre: the internal table of the os frontis was not injured, and the dura-mater not even detached from the cranium, but was covered with a yellow mucus, conſequent to the inflammation, and which ſeemed to have inſinuated itſelf in the cellular ſubſtance. All the ſurface of the left hemiſphere of the brain, and a part of the anterior lobe of the right ſide, was covered with the ſame mucus, and which had communicated a tinge to the cortical ſubſtance.

Agreeable to the opinion of Monſieur Queſnoy, in the firſt volume of the Memoirs of the Academy of Surgery, this patient ſhould have been trepaned on the firſt appearance of the ſymptoms.

But a queſtion ariſes, on what part would you trepan? We have many doubtful indications, nor is there one ſufficiently deciſive to point out where the inſtrument ſhould be applied. The ſeat of the miſchief, we had reaſon to preſume, was on the left ſide, from the injury received on the external table of the os frontis, and from that part being peculiarly affected with pain; yet, ſtill the paralytic affection of the left ſide of the body gave riſe to a ſuſpicion that the cauſe exiſted in the right. For the ſake of argument, let us ſuppoſe, that the ſurgeon, not deterred by theſe contra-indications, after the unſucceſsful application of the trepan on one ſide, had determined to attempt it on the other: what particular part would he have trepaned? He muſt have multiplied its application at the hazard of diſcovering the ſeat of the effuſion; and what advantage could he have obtained by

by theſe reſearches? Would the puriform mucus have been evacuted, that was effuſed in the cellular ſubſtance, and diffuſed over the whole left and part of the right hemiſphere of the brain?

The application of the trepan favours the acceſſion of air, which often produces conſequences ultimately fatal. Scarcely any authors, who have written on wounds of the head, have mentioned this ſpecies of ſuppuration; it is noticed, however, by Smetius and Morgagni. The laſt, in deſcribing the diſſection of many ſubjects, who died from wounds of the head, remarks, that this yellow-greeniſh mucus, and of a gelatinous conſiſtence, was diffuſed in the meninges and over the ſurface of the brain.

Theſe circumſtances have been conſtantly obſerved, in the Hôtel Dieu, in patients, who have died at the ſame period, as the ſubject of the preceding obſervation, and whoſe death has been preceded by the ſame ſymptoms; but, in theſe accidents, if no relief is afforded by the trepan, the beſt effects may be expected from the application of a bliſter applied over the whole head. A number of caſes that have been ſucceſsfully treated in this way, apparently of the moſt ſerious deſcription, will ſoon be publiſhed.

Caſe of an ulcerated Cancer, of an extraordinary Size, cured by the Operation.

[By Mr. DEHANNE, one of the Surgeons of the Hôtel Dieu.]

MADELEINE Lepré, a fiſh-woman, aged 66 years, tall, thin, and of a weak conſtitution, obſerved, in November, 1788, in her left breaſt, a ſmall, hard, moveable, tumour, nearly inſenſible, the cauſe of which ſhe was unable to aſſign. This tumour increaſed rapidly: by the month of April, 1790, it had acquired a conſiderable bulk, it was hard, extremely painful, and diſſeminated with varicous veins; emollient and maturative cataplaſms were applied, which ſeemed to haſten its progreſs; for, in the ſpace of twenty-five or thirty days, it had increaſed ſo conſiderably in ſize, that it exceeded the bulk of her head by one-third: in the centre, an ulcer formed of about two inches in diameter; it was of a fungus nature, and diſcharged, abundantly, a bloody fœtid ſanies. Her ſufferings not allowing her a moment's eaſe, ſhe was admitted, in this diſtreſſed ſituation, into the Hôtel Dieu on the 18th May, 1790.

As the tumour was increaſing faſt, and the patient, though weakened by the diſeaſe, was as well as could be reaſonably expected from the nature of her complaint, it was thought proper not to defer the operation, which was performed, two days after her admiſſion, in the following manner:—

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She was ſeated in a high chair, and ſupported by two aſſiſtants: one elevated the left arm at a little diſtance from the body; Mr. Deſault raiſed the breaſt with his left hand, and put the integuments at the lower part of the tumour on the ſtretch, then, with a ſtraight and ſharp pointed biſtoury, made a ſemi-oval inciſion at the inferior part of the tumor, directing it from the axilla towards the ſternum: the anterior extremity of the inciſion was a little more elevated than the poſterior. An aſſiſtant retracted the ſkin at the lower part, whilſt Mr. Deſault held the breaſt with his left hand, and diſſected the cellular ſubſtance in a direction contrary to the inferior lip of the wound: the cancerous maſs was ſoon detached inferiorly, and was ſuffered to hang pendulous, and the ſkin, at the upper part, being perfectly ſound, Mr. Deſault diſſected it off the tumour, and finiſhed his inciſion where he firſt commenced the operation. The cellular ſubſtance was diſſected as cloſe as poſſible, by retracting the tumour and integuments in different directions. An artery that afforded rather a conſiderable hemorrhage was compreſſed by the finger of an aſſiſtant, it was laid hold of with a pair of diſſecting forceps, and ſecured, by ligature, in the uſual manner. Four other ſmall arteries were ſecured in the ſame way.

The perpendicular height of the wound, reſulting from this operation, was 8 inches; its width ten. After the edges of the wound were well cleaned, and the blood wiped off with coarſe lint, it was dreſſed with ſoft doſſils ſprinkled with colophony, and compreſſes

of

of coarſe lint applied over the whole, and ſecured by a bandage drawn moderately tight. She was put to bed, and her head was a little elevated, with the arm of the affected ſide reſting on a cuſhion, at a little diſtance from the body, but ſufficiently raiſed for to relax the pectoralis major and the ſkin which inveſts it.

The weight of the tumour was eleven pounds, its texture firm, and difficult to cut, and, at the firſt view, had much the appearance of rancid bacon: in its internal part, matter, of different colours and conſiſtence, was diſcovered.

No pain was experienced in the courſe of the day and the night, and ſhe complained only of the bandage being rather too tight. The ſecond day, the dreſſings were ſlightly tinged with blood, the bandage and external compreſſes were removed, and the lint moiſtened with the decoction of marſh-mallows: freſh compreſſes, dipt in the ſame liquor, were applied, and the dreſſings were ſupported, ſuperiorly, by means of a ſcapulary.

The third day, there was little fever, with a ſlight ſerous diſcharge, that indicated approaching ſuppuration; the lint that was eaſily detached was changed, and all the dreſſings were moiſtened with decoction of marſh-mallows. The fourth day, the ſame plan was continued.

On the fifth, the lint, detached by ſuppuration, was eaſily removed, and the appearance of the wound was remarkably favourable. After the edges of the wound were wiped, they were dreſſed with cerate

ſpread

ſpread on linen, to prevent the adheſions of the dreſſings, and the wound was covered, throughout its whole length, with a compreſs dipt in the decoction of marſh-mallows. The dreſſings were the ſame on the following days. On the ſeventh, ſhe was allowed broth, in which there was bread. On the tenth, ſhe had a ſlight cough, which ſoon gave way to the uſe of pectoral decoction. On the fifteenth, the edges of the wound were perfectly level, and began to cicatrize; and ſhe now eat a little roaſt fowl. On the twenty-third, the cicatrix advanced rapidly, and the ſuppuration was ſo trifling, that the uſe of the marſh-mallow-water was omitted.

On the thirtieth, there was ſome appearance of a bilious diſpoſition, which was checked by the uſe of clyſters, and one drachm of cremor tartar in each pint of drink. The appetite ſoon returned, and, to gratify it completely, ſhe procured, clandeſtinely, ſolid food and ſpirituous liquors: this improper regimen produced, on the thirty-ſixth day, a new derangement in the digeſtive organs; the wound became pale and fungous, the pus altered in quality and ſmell, the edges of the wound were excoriated, and the cicatrix in part deſtroyed. She was put on diet; but ſtill the ſuppuration was ſufficiently abundant to render it abſolutely neceſſary to dreſs the wound twice a day. On the fortieth day, it began to diminiſh, and the fungi were touched with the lapis infernalis. On the forty-fifth, the appearance of the wound was much better, and the quality of the matter conſiderably improved.

On

On the ſixtieth, cicatrization began to take place from the circumference of the wound: ſhe was now allowed ſolid food. On the ſeventieth, the patient was attacked with a conſiderable itching, which was ſoon followed with an eruption of ſmall red puſtules, that were diffuſed over the whole body. This event obliged her to have recourſe to her ordinary drink of the decoctions of dock and fumitory: the eruption did not influence the cicatrix; and, on the ſeventy-ſixth, it was judged expedient to make an iſſue in her arm.

On the eighty-third day, conceiving herſelf nearly well, ſhe committed freſh exceſſes, which produced a redundancy of bile: the wound became pale, the diſcharge copious, and of a bad quality. She was treated in the ſame way as before, with clyſters, and a ptiſan acidulated with crem. tartar; which plan was followed till the ninety-ſixth day, when the cicatrix became ſmaller. On the 105th day, the length of the wound was only two inches, and one inch in width; and it now healed ſo faſt, that, on the 120th day, the cicatrix was complete, and was only two inches and a half in extent. Three days afterwards, a gentle purge was exhibited, as her tongue was a little furred, accompanied with a bitter taſte in her mouth.

She was diſcharged from the Hoſpital, perfectly cured, on the 3d of October, 1790, one hundred and thirty-ſix days after the operation, and, at preſent, enjoys the moſt perfect ſtate of health.

In the courſe of practice, we have made many obſervations on cancers of the breaſt cured by amputation; and we ſhall regularly communicate thoſe that are attended with any intereſting particulars. After operations of this nature, cicatrization is generally completed in thirty or fifty days; but ſtill it may be retarded by particular circumſtances, which young practitioners ought to be informed of; and with this view the preceding caſe has been publiſhed.

A variety of cauſes concurred to prolong the cure of this patient beyond the ordinary period: her habits of life, her long ſuffering, and advanced age, the length of time ſhe was afflicted with the diſeaſe, the reſt ſhe was obliged ſo ſtrictly to obſerve, after being accuſtomed to an active life, were all circumſtances that retarded her cure.

Caſe of an Operation for a double Hare-lip, with a Fiſſure in the Palate.

MARY Dehannes, a foundling, 5 years of age, was admitted into the Hôtel Dieu on the 7th of September, 1790, for an operation for the hare-lip, an engraving of which is annexed.

In the upper lip, under the noſtrils, there were two fiſſures, one-third of an inch wide, and which ex-

extended into the poſterior noſtrils: theſe fiſſures were ſeparated from each other by the protuberance (b), which was rounded inferiorly, and was ſhorter than the other portions of the lip: its baſe was on a level with the extremity of the noſe, with which it was connected. Behind this protuberance was obſerved a portion of the upper jaw (a), half an inch wide, which projected more forwards than the reſt of the maxillary bones, from which it was ſeparated on each ſide by a fiſſure of about (f) one quarter of an inch wide: this boney eminence, whoſe inferior part was on a level with the alveolar proceſs, ſupported the two middle inciſſors (which were ſmaller than uſual, and movable in their ſockets): ſuperiorly, it was continued with the ſeptum naſi, whoſe lower edge led to the middle of a fiſſure, the width of which exceeded three-fourths of an inch, and divided, from before backwards, the vault and the arch of the palate.

This child could only uſe the cuſpidati and the bicuſpides in laying hold of her food. Her maſtication was difficult; and, during deglutition, a part of the aliment regurgitated into the poſterior noſtrils, and part paſſed through the fiſſures of the lips; but theſe inconveniences were, in ſome meaſure, obviated by the child having the precaution to take little food into her mouth at a time: ſhe ſwallowed fluids with much more eaſe; for, by inclining her head backwards, they paſſed directly into the pharynx.

Her ſpeech was imperfect, the tones of her voice being naſal; her pronunciation of vowels was mode-

rately distinct, but she articulated consonants with such difficulty that she could be understood only by those that were frequently with her.

To bring the protuberance on a level with the lip, and to depress the projecting portion of the maxillary bones, a linen bandage was contrived which compressed them both, by being passed over the upper lip and fixed to the back-part of the neck: its good effects were immediately evident, and its use was continued till the 18th of September, when the operation was performed.

As the patient was in good health, no other preparation was necessary but regulating her diet a few days before the operation. Her hair was ordered to be combed, and some mercurial ointment to be applied to destroy the vermin, which might occasion uneasiness, and, by this means, the bandage was more likely to remain undisturbed. The posterior part and the cavity of the ears were guarded with lint, to prevent the inconveniences of pressure, and to absorb the perspiration, which, by being confined during the application of the bandage, might irritate, or even ulcerate, the parts.

The patient was brought to the theatre and seated on a high chair, with her head against the breast of an assistant; who, with her hands applied to the lips, pushed them forwards, and, at the same time, compressed the external maxillary arteries where they pass on the lower jaw. Mr. Default placed himself before the patient, and a little to the right, then held the left portion of the lip with the thumb and fore-

finger

finger of the left hand, and, with a ſharp pair of ſciſſors, rounded on both ſides, cut out the red as high up as the openings in the noſe, perpendicular to the thickneſs of the lip, taking care to remove a ſomewhat larger proportion of the lower part, where the edge was rounded (c c *fig.* 1*ſt*). He then took hold of the lower part of the protuberance, and put it on the ſtretch; then cautiouſly divided the left edge exactly in the ſame way; and divided the right portion in the ſame manner, and the correſpondent part of the lip. Whilſt he held, with his thumb and index-finger, the angle of the wound that correſponded with the left fiſſure, he paſſed into the lip, at the diſtance of one-twelfth of an inch from its looſe edge, and one quarter of an inch from the wound, a gold pin (*fig.* 5*th* and 6*th*), rubbed with cerate, and, paſſing it backwards and upwards, paſſed it through the fiſſure, then, fixing the protuberance on a level with the lip, he puſhed the pin through it about its middle; and, after adjuſting the right portion of the lip againſt the protuberance, he paſſed the pin in a ſimilar way, but in an oppoſite direction to the one he had paſſed on the left ſide.

While Mr. Deſault retained the parts in a ſtate of appoſition, by holding the two ends of the pin, an aſſiſtant introduced, behind the latter and before the protuberance and the lip, a loop of waxed thread, which he drew downwards, with the intention of keeping the parts on the ſtretch; and, in contact upon this loop, the operator introduced another piece of waxed ligature, which he paſſed ſeveral times in the

form of a figure of 8, croſs and round the pin, taking care to bring the thread ſometimes acroſs, and ſometimes under, the protuberance; he next introduced a ſecond pin under the noſe, a quarter of an inch above the firſt, and paſſed it through the two portions of the lips, being careful to bring the two other portions of the lip on a level with the protuberance, by bringing them forward: he then twiſted a piece of waxed ligature about the ſecond pin, in the ſame manner as the firſt, and afterwards carried the thread, alternately, from one pin to the other, in the form of a figure of eight, till he had covered the whole ſurface of the lip (ſee *fig.* 2.). The ends of the thread were then ſecured by a knot, and the loop, which had ſerved to keep the parts in contact and on the ſtretch, was cut off as high as poſſible.

Mr. Deſault applied two compreſſes on the cheeks (dd, dd, *fig.* III.) one inch in thickneſs, extending from the maſſeter muſcle to the commiſſure of the lips, and from the os malæ to the lower jaw: theſe compreſſes were preſſed forwards, and ſupported by an aſſiſtant; ſmall compreſſes were placed between the ends of the pins and the ſkin; and the lip was covered with a pledgit of lint, over which was laid a compreſs (c c c c) moiſtened with aq. vegeto.

A bandage of the ſame breadth as the lip, and three ells in length, was carried, from right to left, ſeveral times round the head, directly above the eyebrows, and fixed, with a pin, behind the right ear, and on a level with the upper lip; then brought over the

the compreſs of the ſame ſide, thence under the noſe and over the compreſs of the left ſide, then behind the left ear, to which it was fixed by a pin: the reſt of the bandage was carried in circular turns round the head, and to prevent the compreſſes and bandage being looſened, they were ſupported by a ſmall bandage (i i ii) which was placed on each ſide. The middle of this was paſſed obliquely under the chin, and one of the heads of it was brought over one of the compreſſes, and the other behind the ear of the oppoſite ſide to the top of the head, where they were faſtened, and fixed to the compreſs on each ſide, and to the firſt bandage, by means of pins.

The motions of the lower jaw were confined by fixing the chin with the ſling bandage (f f), the ſuperior ends of which were fixed behind the occiput, and the lower ends to the top of the head, and the whole was rendered ſtill more ſecure by ſeveral turns of a bandage (a a a a) carried round the head.

The operation was, by no means, tedious; nor the introduction of the pin attended with much pain. She was put to bed and ſlept part of the day, and the next day there was neither ſwelling nor pain; the ſmall compreſs was removed and a freſh one applied, moiſtened with aq. veg. min. On the third day, ſhe was allowed to eat panada. On the fourth day, the pins were withdrawn by their points, after being previouſly cleaned and ſmeared with cerate; they were more eaſily diſengaged, by performing a ſort of rotatory motion: the dreſſings were the ſame as before. On the fifth, the threads fell off, and the parts ſeemed

perfectly united (see *fig.* IV.), and the patient's pronunciation appeared much improved. On the seventh, the punctures, made by the pins, slightly suppurated: on the tenth, they were cicatrized, and the marks were scarcely perceptible.

On the thirty-eighth, she left the Hospital. Since her cure she has returned several times to be examined: her articulation is found to be perfectly distinct, and the lip has regained its natural length, the fissure in the arch of the palate is diminished one-third, and the alveolar arch is perfectly regular.

Many instances, in some degree similar to the above case, are to be found in books. The cure was always viewed by the ancients as impracticable; but modern surgeons, persuaded that the projecting portion of the maxillary bones formed the chief obstacle, have recommended its excision: but experience proves, that it is always easy to bring the lips over this ossious projection, and, by the means of a bandage, effect its depression even to a level with the lateral parts of the jaw, so as to render this excision unnecessary. Besides, this operation is open to many objections: it leaves a considerable space between the maxillary bones, excites inflammation in the adjoining parts, and deprives the lip of the advantage of a support at that part where it was divided; but, even under these disadvantages, if an union should take place, the action of the muscles would bring the maxillary bones nearer to a state of contact; the upper jaw would become contracted, so as to fall within the under one,

which

which would render maſtication difficult, and preſent alſo another deformity.

With reſpect to the mode of performing the operation for this ſpecies of hare-lip, there are many different opinions. With regard to the manner, the inſtruments, and the means employed to procure a reunion:

Some have thought they have ſimplified the operation by re-uniting one of the ſides of the lip to the middle part, and, after this was completely healed, to proceed to operate on the other ſide. Others recommend to finiſh the operation at once.

Although Severinus, in his "Treatiſe de Efficacia Medicinæ," recommends the biſtoury in the operation of the hare-lip; yet ſciſſors have been uſed for a long time, and, though many objections have been urged, yet ſtill many ſurgeons prefer them; nor is this opinion ill-founded: the operation is more ſpeedy and eaſy; nor is there any neceſſity to ſeparate the lip from the gums, becauſe the parts are not cut upon paſte-board as with the biſtoury, and the ſurgeon can hold himſelf thoſe parts he wiſhes to divide, the inciſion can be made with the ſciſſors with more firmneſs and regularity; for, with the biſtoury, the inciſion from the contraction of the parts is often irregular, nor are the edges of the wound, as it is ſaid, bruiſed: for, when the ſciſſors are ſharp and well conſtructed, they cut nearly as well as the biſtoury, and, from experience, we find the wound unites equally well.

The

The ſuture was, for a long time, eſteemed the only method of obtaining the union of the hare-lip, and is yet preferred, in ſome difficult caſes, by many practitioners. The inconveniences that ſometimes reſult, depend on the manner of performing it, and on the dreſſings that are made uſe of: a number of caſes, in the Hôtel Dieu, that have been united by ſuture, and that have done perfectly well, are proofs of the juſtice of this opinion. Beſides, however perfect the bandage may be, it does not retain the parts with ſufficient exactneſs, nor does it prevent the blood and the ſaliva from inſinuating themſelves between the edges of the wound; it cannot lengthen parts that are too ſhort, nor elevate thoſe that are depreſſed; all theſe advantages the operation by pins certainly poſſeſſes, when ably conducted.

According to Heiſter, the Germans employed nothing but a ſufficient number of ſutures to procure the reunion; ſurgeons, from experiencing their inſufficiency, prefer the uſe of pins, but differ ſomewhat reſpecting their form and compoſition. Gold, as it will not ruſt, and can be made ſufficiently ſharp, is to be preferred.

The bandage, mentioned in the above caſe, is of a more ſimple conſtruction than the generality of uniting bandages invented for the purpoſe: its action is confined to the compreſſes and cheeks, it lies ſmooth, and does not preſs on the lip, which is not liable to be wounded by the pins; and, if the compreſſes are puſhed forward at the inſtant of its application, they will act in the ſame way as a bandage, the

the heads of which are made to croſs each other under the noſe.

EXPLANATION OF PLATE II.

FIG. I. The ſtate of the infant when admitted into the Hôtel Dieu.

a. The projecting portion of the jaw, half an inch in width.

f f. Fiſſures, one quarter of an inch in width.

b. The rounded projection, and continued with the end of the noſe, forming the middle part of the lip.

c c. The rounded angles of the divided portions of the lips.

FIG. II. The twiſted ſuture.

p p. Points of the pins.

t t. Their blunt ends.

FIG. III. The appearance of the infant with the apparatus.

c c c c. A ſmall compreſs placed on the wound.

d d, d d. Thick compreſſes to preſs the cheek forward.

b b. Part of the uniting bandage paſſing over the compreſſes of the lips and cheeks.

i i. Small

i i. Small bandages ſupporting the compreſſes of the cheeks.

f f. The ſling bandage.

a a a a. Turns of the roller fixing the whole of the apparatus.

FIG. IV. State of the lip after the cure.

FIG. V. and VI. Shape of the pins.

A Caſe of Mortification of the inferior Jaw.

[By J. B. J. Boulet, Surgeon to the Hôtel Dieu.]

EUSTACHIUS Provent, a ſoldier in the National Guard, 39 years of age, and of a good conſtitution, eight months ſince was affected with a caries of the firſt dens molaris of the right ſide. He had occaſion to paſs the whole night expoſed to a cold and moiſt air: the pain, that was before trifling, was now aggravated to an inſupportable degree. The next day there was a conſiderable fluxion at the part; the reſolu-

reſolution of which was ineffectually attempted by bleeding and the application of a poultice over the whole cheek. The ſwelling and pain increaſed, and, at the eighteenth day, ſeveral abceſſes diſcharged themſelves in the mouth; at this period, all the dentes molares, except the firſt, fell out; ſoon afterwards there appeared, under the angle of the jaw, a conſiderable depoſition of matter; and, at the right ſide of the neck, which had not been preceded by the ſymptoms that uſually accompany phlegmonous inflammation, an aperture was made; and, on examination with a probe, the jaw was found denuded: and an other abceſs being opened, that was ſituated towards the alveolar proceſs of the laſt dens molaris, another portion of the bone was expoſed.

The patient, diſtreſſed by the tedioufneſs of the caſe, preſented himſelf at the Hôtel Dieu, on the 15th November, 1790, ſix weeks after the firſt ſymptoms of the diſeaſe. A ſwelling, accompanied with conſiderable hardneſs, occupied the whole cheek and the correſpondent part of the neck, which produced an inability of ſeparating the jaws; above a quarter of an inch in the inſide of the mouth, towards the termination of the alveolar proceſs, above three-quarters of an inch of mortified bone was expoſed and felt: it appeared, in a great meaſure, detached, and admitted of a ſlight degree of motion; circumſtances that determined Mr. Deſault to attempt its extraction the next day.

An aſſiſtant having ſeparated the commiſſure of the lips, Mr. Deſault introduced a curved biſtoury on the

the fore-finger of his left hand, and divided the ſoft parts that inveſted the fore-part of the jaw, and, paſſing his finger along the internal ſurface of the diſeaſed bone, he diſcovered that the veſſels and the inferior dental nerve were out of their canals, their internal ſides being deſtroyed through their whole extent; the ſoft parts, that remained adhered to the bone, were then detached; then raiſing, with his finger, the anterior branch of the jaw, he diſengaged the diſeaſed portion, and extracted it with the greateſt facility: it comprehended the whole branch of the jaw, except the condyle and the top of the coronoid proceſs; new oſſific matter was diſcovered poſteriorly, and on the outſide of that part where the diſeaſed portion was ſituated: the motions of the jaw were ſoon reſtored as well as before the accident.

The opening of the fiſtulous orifice in the neck was a little enlarged for the paſſage of a ſeton, which was drawn through the mouth, and a poultice was applied to the cheek; and, every evening, the cavity of the extracted bone was well injected with a decoction of marſh-mallows. The next day, it was diminiſhed to half its ſize, and the ſufferings of the patient were trifling; the ſwelling, however, in ſome meaſure, augmented; and there was a moderate diſcharge of pus from the mouth, as well as from the fiſtulous orifice.

On the fourth day, the ſwelling was leſs, the pus white and more abundant, and the gargles and injections paſſed out in part of the fiſtulous orifice. On the eighth, as there was little ſwelling, and the diſ-

charge

charge ſmall in quantity, the ſeton was omitted; but the uſe of the poultices, gargles, and injections, was perſiſted in, which ſtill, in part, flowed out of the fiſtulous orifice. The patient could now chew ſolid food.

On the evening of the tenth day, he was afflicted with a conſiderable fluxion and ſwelling on the cheek, which, probably, might be attributed to the dampneſs of the ward that had been waſhed ſome hours before. Solid food was preſcribed, and he was ordered to drink plentifully of a decoction of dog's tooth acidulated with oxymel, and an enema to be adminiſtered in the evening; but, notwithſtanding theſe precautions, the ſwelling increaſed, a bitter taſte in the mouth, a fœtid breath, a furred tongue, and a feveriſh pulſe, were ſymptoms that announced a diſeaſed action of the digeſtive powers: a grain of tartar emetic was given, which vomited, and produced ſome bilious ſtools. The pulſe was natural and regular in the evening. On the thirteenth, the ſwelling and other ſymptoms were much diminiſhed; he wiſhed for ſolid food, which was allowed him the next day. On the fifteenth, there was no ſwelling, except towards the ſternum; the wound in the mouth would ſcarce admit the extremity of the finger, and afforded but little ſuppuration. The injection did not now paſs through the fiſtulous orifice, and its external opening was cicatrized the next day. On the twentieth, a ſmall abceſs was obſerved at the ſuperior part of the ſternum, which was opened three days afterwards, with-

without any particular circumſtance occurring worthy notice.

The patient was diſcharged from the Hoſpital on the 13th of December, twenty-eight days after the operation. The wound of the mouth was not yet perfectly cloſed, though there was no cavity; there remained on the cheek a tumour formed by the new-formed bone. The mouth admitted of being opened above a quarter of an inch, and the motions of the jaw were perfectly recovered.

This man has often returned to the Hoſpital ſince his diſmiſſion: his cheek has nearly re-aſſumed its natural appearance, but the internal wound in the mouth yet remained fiſtulous.

Caſe of a Fungus in the Maxillary Sinus.

[By Mr. PLAIGNAUD, One of the Surgeons of the Hôtel Dieu.]

JAMES Thibault, 22 years of age, a ſoldier in the regiment of Viennois, was attacked, in the year 1785, with deep-ſeated pains in the maxillary ſinus, after receiving a violent contuſion on the malar tuberoſity of the right ſide. Theſe pains remained for a long

long time before any change was perceived externally. In September, 1789, the os mali began to ſwell, and the eye to project, the ſight grew more enfeebled every day, and the ductus naſalis began to contract, which produced epiphora, or the watery eye.

The ſoldier, unable to continue his duty, went to the Hoſpital at Liſle, in Flanders, where, agreeable to his account, his diſeaſe was taken to be an ozena of the maxillary ſinus. After extracting all the great molares of that ſide, they perforated the alveolar proceſs; inſtead of pus they diſcovered a fungus tumour, which they tried to extract, but were prevented by a conſiderable hemorrhage, which was checked by the application of lint dipt in colophony. The opening that had been made accelerated the growth of the fungus, which ſoon extended into the mouth, where it met with no reſiſtance.

Six days after this firſt attempt, they applied the actual cautery to the fungus, which checked its growth in a certain degree, but not entirely: it continued to increaſe, and, on the twenty-ſecond day after its application, its ſize was ſufficiently large to fill up a conſiderable part of the mouth and the whole of the right noſtril. It was conceived that an attempt to extract that part that was in the noſe would be attended with more ſucceſs. The ligature was made with wire, which they tightened by twiſting it repeatedly with a pair of forceps: theſe twiſtings were attended with ſuch intolerable pain, that the patience of the patient was entirely exhauſted; he, therefore, declined any farther

 aſſiſtance,

assistance, and applied to the Hôtel Dieu, where he was admitted on the 12th of December, 1789.

At this period, he could not open his mouth but with difficulty, the globe of the right eye projected and vision was imperfect, tears ran constantly down his cheek, the nostril was dry, and the cheek, as well as the malar tuberosity, was considerably elevated.

With respect to the fungus, it depressed the vault of the palate and the alveolar arch, and occupied such a considerable portion of the mouth and posterior nostrils, that deglutition and respiration were considerably injured. The ligature that had been passed in the nose still remained, and produced exquisite pain every time it was touched.

The event of any new operation, under all these unfavourable circumstances, was extremely uncertain; but, from his earnest solicitations, and the courage he evinced under his sufferings, the surgeon was induced to attempt his relief. He was seated in a chair, and, whilst an assistant kept his mouth open by means of a key, the surgeon made, on the inside of the tumour, a semi-lunar incision from behind forward, extending from the velum pendulum palati to the anterior part of the palatine vault. A second incision, of the same extent, was then made on the external side of the tumour, between the buccinator muscle and the alveolar arch; then, laying hold of the tumour with the fore-finger and thumb, he took it away, dissecting, at the same time, from behind forwards, and from within outwards.

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Fig. I.

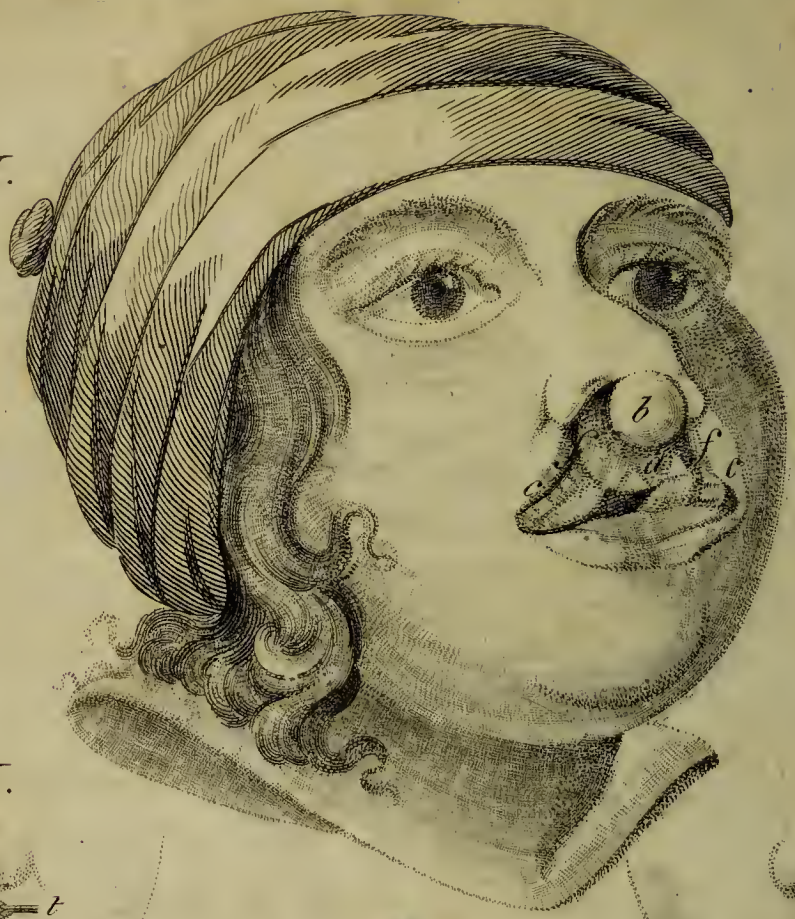

Fig. II.

Fig. IV.

Fig III.

Fig. V.

Fig. VI.

The hemorrhage was conſiderable, as was expected; it was attempted to be checked by the application of lint, which, being ſoon found inadequate to the intention, was withdrawn, and the actual cautery, heated to a white heat, applied in its ſtead.

The application of the cautery was frequently repeated, not only with the view of checking the hemorrhage, but alſo of deſtroying the fungus. The cavity, that was left after its extirpation, was filled with lint ſprinkled with colophony; the jaws were cloſed, and retained in this ſituation by means of a ſling bandage. To prevent, as much as poſſible, the ſwelling and inflammation conſequent to the application of the cautery, a poultice was applied over the whole cheek. The patient ſuffered little in the courſe of the day; but, towards evening, he had a ſlight attack of fever, which increaſed during the night.

The next day, there was ſome ſwelling, with conſiderable heat. The third day, ſome of the doſſils were withdrawn, and replaced with ſoft lint; the ſwelling was a little increaſed, but the heat and thirſt were leſs. On the fourth, the outſide lint was removed; but, for fear the hemorrhage ſhould be renewed, that on the inſide, which ſtill adhered, was not meddled with. On the fifth, the feveriſh diſpoſition of the patient entirely ceaſed.

On the ſixth, the ſwelling was a little decreaſed, there was no fever, his ſtrength was ſupported by rice creams, which he ſwallowed with difficulty.

On the ſeventh, the doſſils of lint, and the eſcars produced by the cautery, were detached by the ſup-

purative proceſs: this ſeparation was followed by a renewal of the hemorrhage, which was ſtopped by doſſils of lint dipt in colophony, and retained in their ſituation by cloſing the jaws. By the next day, this lint loſened by ſuppuration, and fell off without any return of the hemorrhage. On the eleventh, the ſuppuration was leſs, the patient ſuffered little, and he now uſed a gargle of barley-water and honey of roſes. On the fifteenth, the tears began to take their natural courſe, and the eye to regain its former ſituation in the orbit, ſuppuration entirely ceaſed, and the gargariſms were omitted.

At this period, Mr. Deſault, convinced of the inutility of the ligature paſſed into the noſe a month before, was induced to make ſome attempts to withdraw it; but they were attended with ſuch exquiſite pain, that he was obliged to abandon the idea: from obſerving that the patient was eaſier when the ligature was drawn forward, it was conceived that gentle means, long continued, would produce the ſame effect as twiſting the wire. The extenſion of the ligature was kept up, by fixing it to the cheek with adheſive plaſter. This contrivance was attended with ſucceſs; for, the wire fell off on the fourteenth day.

A portion of fungus appeared on the thirtieth, and, in ſix days, grew to the ſize of a pigeon's egg; the hot iron was applied, and the eſcar fell off in three days. The ſize of the cheek now ſenſibly diminiſhed, his ſufferings were little, and his cure daily advanced: however, the twenty-fifth day after this ſecond application

cation of the cautery, ſome fungi appeared in the bottom of the ſinus, towards the inner part of the orbit. They were deſtroyed, like the others, by the repeated application of the cautery.

On the eighteenth, after this third application, the cheek had regained nearly its natural ſize, the tears paſſed freely through the ductus naſalis, and the ſight was equally perfect on the affected ſide.

On the twenty-ninth, the patient complained of an uneaſy ſenſation in the right noſtril. On examination, a deep-ſeated fungus was diſcovered, which ſeemed to originate from the velum pendulum palati. It was burnt in the ſame manner, with the iron introduced by a canula through the noſe.

This fourth application of the actual cautery was the laſt, the fungi having been deſtroyed even to their roots, and never more appeared. The ſides of the maxillary ſinus (where theſe luxuriances ſeemed to grow) approached each other; but, in the place of this cavity, there was nothing more than a hollowneſs, which correſponded to that part of the alveolar arch.

He remained in the Hoſpital a month after his cure, to ſee if new fungi would make their appearance; and was diſcharged, perfectly well, on the 134th day after his admittance.

This ſoldier ſupported the different applications of the actual cautery with uncommon courage, and, it is but juſtice to ſay, that his cure may be attributed as much to his own fortitude and good conduct as to chirurgical aſſiſtance.

Case of a Schirrus Tumour in the Pylorus.

[By Mr. Bruguiere, Surgeon in chief to the Military Hospitals.]

MR. Dangas, an enfign in a regiment of infantry, about 50 years of age, and, apparently, in good health, was extremely fubject to eructations and borborigmi after his meals; he was frequently diftreffed by colicky fenfations, and a peculiar uneafinefs in the epigaftric region, which he attributed to a defect in digeftion. To remove this complaint, he was in the habits of employing the pil. coch.

He was employed, at this time, in the recruiting-fervice; and, whilft in garrifon at Nîmes, was attacked with thefe violent colicky pains, and fent for Mr. Bruguiere on the 24th June, 1774.

On examination, Mr. Bruguiere found the lower belly acutely fenfible, the pulfe hard and fmall, the tongue dry, accompanied with ardent thirft, the urine thin and of a high colour; and, from not having had an evacuation for many days, he had had recourfe to the purgatives that he ufually took. Mr. Bruguiere bled him, and ordered diluents, oily medicines, emollient clyfters, and fomentations, which were perfifted in till the next day, when the patient appeared more calm and tranquil: two ounces of manna, and the

fame

ſame quantity of oil of ſweet almonds, were exhibited. An hour after Mr. Dangas had taken this portion, he made fruitleſs efforts to break wind backwards; and, perſuaded that his health depended on this circumſtance, demanded eagerly ſome medicine to produce this effect. A little time afterwards, feeling a diſpoſition to go to ſtool, he raiſed himſelf to go to the chair, which he had ſcarce reached when he was attacked with ſincope. He was removed to his bed, when, in a moment, he was attacked with a cold ſweat over the whole ſurface of the body, his countenance changed, and the pulſe became ſo weak as ſcarcely to be diſtinguiſhed. The ceſſation of theſe ſymptoms, Mr. Bruguiere prognoſticated, was a deceitful calm, and that it was the forerunner only of internal gangrene and approaching death.

As the examination of the body could only explain the cauſe of his ſudden deceaſe, Mr. Bruguiere, in the preſence of ſome other ſurgeons, made an opening into the abdomen. On the firſt inciſion, a vaſt quantity of air was extricated, accompanied with ſome exploſion, and followed with a diſcharge of purulent matter, mixed with oil and other liquids which the patient had ſwallowed: this induced the aſſiſtants to ſuſpect that the ſtomach or inteſtines had been unintentionally wounded. The omentum was found, in different parts, in a ſtate of ſuppuration. The inteſtines, ſmall as well as large, were inflamed, and, in part, gangrenous, and their external coat detached by ſuppuration.

The meſentery and ſpleen preſented the ſame diſeaſed appearances; but what excited particular notice was a ſchirrus tumour in the pylorus, of the ſize of a pigeon's egg, with an ulcer in the centre, which had ulcerated through the whole depth of the tumour: conſequently, all the liquids, which were received into the ſtomach, were diffuſed between the peritoneum and inteſtines. This circumſtance perfectly explained the cauſe of the patient's death, and the iſſue of the air, &c. on opening the abdomen.

The Diſeaſes of the urinary Organs continued.

WE have defined, page 55, retention of urine, "a complaint occaſioned by the urine being "obſtructed in ſome of the excretory paſſages." This definition naturally leads to a farther ſubdiviſion, and induces us to divide this diſeaſe of retention into as many ſpecies as there as are excretory paſſages, which are four in number. This retention may take place, firſt, in the ureters, or infundibula: ſecondly, in the bladder: thirdly, in the urethra: and, fourthly, under the prepuce.

In this diviſion, the immediate ſeat of the obſtruction is only conſidered, and not where it is diffuſed; for,

for, we find this diffuſion takes place in many cavities at the ſame time: for example, an obſtruction in the urethra of long ſtanding communicates itſelf to the bladder, thence to the ureters, and progreſſively affects the ſubſtance of the kidneys themſelves. We ſhall be careful in treating of each ſpecies of retention, to diſtinguiſh that which originally takes place in any particular cavity from its conſequent effects.

Retention of Urine in the Ureters.

Under the denomination of retention of urine in the ureters, are alſo comprehended thoſe retentions that take place in the pelvis of the kidney and in the infundibulum. This diſeaſe has been deſcribed, by the greateſt part of ancient as well as modern authors, under the name of iſchuria of the ureters: it is a very frequent diſeaſe, and moſt authors, who have treated on the ſubject, have adduced caſes; and, in diſſection, we have met with a variety of inſtances; both ſexes, and all ages, are liable to its attack: but women, however, are more ſubject to it than men, and children than adults. Sometimes it is ſingle, and confined only to one ſide; ſometimes double, when both ſides are equally affected. In both caſes, it is either complete or incomplete: complete, when the patient is unable to evacuate a drop; and incomplete, when only a few drops eſcape. The quantity of urine retained is, in a greater or leſs degree, in proportion

to

to the diſtance of the obſtruction from the kidneys, and the degree of diſtenſibility of the parts that retain it.

The internal coats of the cavities where the urine is retained are aſtoniſhingly ſtimulated; at firſt, they admit of dilatation, and, when the urine can no longer overcome the reſiſtance, it regurgitates into thoſe parts where it was originally ſecreted, and diſtends them in their turn, and the kidneys are ſometimes enlarged to twice or even three times their natural ſize: the infundibulum has been often known to contain more than a pint, and, from its ſize, reſembling the bladder itſelf;* and the ureters have been found equal in ſize to the inteſtines,† and even to the colon itſelf, and forming, in their deſcent, a zigzag courſe with circumvolutions;‡ ſometimes they form pouches or partial§ dilatations, ſeparated from each other internally by contractions of its coat, forming a ſort of valve.‖ In all theſe caſes, their tunics become thick and denſe, and the cellular ſub-

* Ruiſch, cent. rar.

† Monro's Edinburgh Medical Eſſays.

‡ Morgagni, Epiſt. 42.

§ Ibid.

‖ This circumſtance was obſerved in the body of a child that was opened in the Hôtel Dieu. The kidneys were in a ſtate of ſuppuration, filled with ſtones, and the ureters as large as the thumb, in the middle part of the right ureter there was a contraction of its internal coat, annular in its form, reſembling much the valve of the pylorus: the ſuperior part was conſiderably dilated.

ſtance that ſurrounds them becomes firm and compact.

The cauſes of retention of urine, in the ureters, are very numerous; they may be divided in three claſſes: 1ſt, When they are obſtructed by the paſſage of extraneous bodies, ſuch as ſtones, hydalids, clots of blood, worms, pus or inſpiſſated mucus. 2dly, When their coats are affected by inflammation or ſpaſm. 3dly, When the ureters are preſſed upon by tumours in the adjacent parts, which may alter their ſituation, or prevent the influx of urine. This effect may be produced by dropſy, flatus in the inteſtines, tumours in the meſentery and meſocolon, hardened fœces in the rectum, ſchirrus affections of that inteſtine, of the uterus, of the ovaria, and of the bladder, inflammation of this viſcus fungi at the mouth of the ureters, &c.

Whatever may be the cauſe of retention, the ureters dilate upwards from the part where the obſtacle exiſts, even as high as the kidneys, and the remaining part of theſe canals are empty and contracted the reſt of their extent; and, when the ureters are ſecondarily affected, that is ſubſequent to the retention of the urine in the bladder, the valvular mode of communication, which is at the inſertions of the ureters into that viſcus, is often effaced; and the opening of communication between theſe two cavities becomes ſufficiently large to admit the finger: it has happened frequently, that the catheter has been paſſed into one of the openings, thus enlarged. This circumſtance we ſhall have occaſion to recollect; for, it is about the commence-

ment

ment of the ureters, and near their oblique termination in the bladder, that extraneous ſubſtances are generally ſtopped: but, ſtill, they are not unfrequently diſcovered at that part of the ureter, where it forms a curvature to enter the pelvis.

Stones in the kidneys are one of the moſt frequent cauſes of ſuppreſſion of urine: we muſt be cautious of forming a proportionate idea of the ſize of the ſtones, from the conſideration of the ſize of the ureters; for, they will often dilate ſufficiently to admit a ſtone the ſize of a hazel-nut; but ſometimes very ſmall ſtones will form an obſtruction, and conſequently retention. When they remain for a long time, they increaſe by freſh depoſitions, and give that oblong form, which is generally remarked in thoſe extraneous bodies. Sometimes the urine forms a ſulcus in one of the ſides of the ureter; and ſometimes the ſtones, though ever ſo large, will produce only a partial retention.

Hydatides will ſometimes produce this diſeaſe: Morgagni has found a ureter full of theſe veſicles.* Mr. Deſault has preſented a preparation of this nature to the Academy of Surgery, which he took from the body of a woman, one of whoſe kidneys appeared little elſe but an aſſemblage of hydatides, adhering to a very ſlender pedicle. The ureter of the ſame ſide contained many of the ſize of a raiſin-ſtone, which ſeemed as if they had been detached from the

* De Cauſis & Sedibus Morb.

kidney,

kidney, and, ſtopping in the ureters, had intercepted the courſe of the urine.

We have no caſes to adduce in ſupport of the opinion, that retention of the urine, in the ureter, is ever occaſioned by pus or inſpiſſated mucus: this, as a cauſe of obſtruction, we have only advanced on the authority of authors, and not from our opinion; we alſo entertain our doubts reſpecting the ſpaſmodic affection of the ureters, or at leaſt it is a queſtion whether their powers of contraction and ſpaſm are ſufficient to obſtruct the paſſage of urine; for, certainly, there is no analogy of ſtructure between theſe tubes and the capillary veſſels of the kidneys: we can conceive that theſe laſt, if poſſeſſed of great tone, might contract ſufficiently on themſelves for their cavities to be effaced; but, for the ſame effect to take place in the ureters, we muſt ſuppoſe they poſſeſs nearly the ſame irritability as muſcles; and we are equally diſinclined to believe they have this property as to agree with Hoffman in their motions of ſyſtole and diaſtole.

We alſo are very doubtful that the colon, when diſtended with flatus, can compreſs the ureter with ſufficient force to produce ſuppreſſion of urine; but this effect often reſults from large tumours, ſituated in the cavity of the pelvis: an inſtance of which occurred lately, in a ſubject brought for anatomical demonſtration. A ſchirrus uterus, of the ſize of the fiſt, was adhering to the poſterior part of the bladder. The two ureters were dilated to the ſize of the finger; the infundibulum, of the right ſide, was twice

twice its natural ſize, and the kidneys about one-third.

We rarely know, till after death, that the ſeat of retention had exiſted in the ureters. We meet with theſe retentions frequently in ſubjects, who, during their life, never experienced any affection of their urinary organs: and, certainly, in the living ſubject, we have no ſenſible proof that the retention exiſts in the ureters. For, however extenſive and conſiderable the dilation may be in the ureters or infundibulum, yet no external tumour appears, nor can it be diſcovered through the parietes of the abdomen.

When the retention exiſts only on one ſide, the quantity of urine evacuated is not diminiſhed; the other kidney ſecreting double the quantity. When a total retention takes place, on both ſides at once, it is confounded with ſuppreſſion of urine; which, indeed, ſoon follows, attended with the uſual ſymptoms.

It is only then, by commemorative ſymptoms, joined to thoſe of the ſeat and nature of the pain, that we are enabled to point out its ſituation. For example: if a man, after experiencing the ſymptoms attendant on ſtones in the kidneys, ſhould immediately feel a pungent pain in the courſe of the ureters, with a ſenſe of weight and tenſion, extending from the part where the ſtone is fixed to the legion of the kidneys, we then have reaſon to infer that the retention is produced by a ſtone obſtructing the urine in that canal.

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This opinion is rendered ſtill more probable, when a patient, having once voided ſmall ſtones with the urine, is attacked with the ſame pains, which, ceaſing on a ſudden, are ſucceeded by ſymptoms that indicate the exiſtence of a ſtone in the bladder. We are juſtified alſo in ſuppoſing that retention is occaſioned by preſſure on the ureters, if the paſſage of the urine is ſuddenly obſtructed, and there exiſts carcinomatous affections of the rectum or uterus, without previous affection of the urinary organs.

Retention of urine in the ureters, according to the cauſe, is more or leſs dangerous. When it is retained for a length of time in a dilated ureter, it becomes acrid and corrupt, produces irritation in that canal which is propagated to the kidney itſelf, and brings on ſuppuration in that viſcus with its attendant conſequences. Sometimes, when the ureter is extremely diſtended, it gives way, and the urine is extravaſated in the adjoining parts, or diffuſed in the cavity of the abdomen, producing a dropſy of a particular deſcription.

But we may conſole ourſelves, for the obſcurity of the cauſes of retention of urine in the ureters, with this idea, that, if known, they throw no light on the cure. Medicine can afford but little aid; and, from the nature of its ſituation, no advantage can poſſibly be derived from the aſſiſtance of the ſurgeon; except in ſome particular caſes, that are, however, extremely rare. If the retention ſhould happen to ariſe from a quantity of indurated fœces in the rectum, their extraction would re-eſtabliſh the flow of urine,

or

or if the obſtruction aroſe from a ſtone, ſituated at the inſertion of the ureter in the bladder, ſimilar to the caſe related in this Journal, page 36, it might be eaſily extracted by the directions laid down in that obſervation: and ſometimes an opening might be ſucceſsfully made in the lumbar region, in caſes of urinous depoſits, ſubſequent to retention, when otherwiſe death would be inevitable. But there remains frequently a fiſtulous orifice in the part where the opening is made, unleſs it gives exit to the extraneous ſubſtance that formed the obſtruction in the ureter. In other caſes of retention, the remedies, both external and internal, ſhould be adapted to the cauſe and nature of the diſeaſe.

Vomits, exerciſe on foot or horſe-back, or any plan that will produce a general ſhock to the ſyſtem, may tend to diſengage the ſtone from the ureter, and haſten its progreſs into the bladder. But theſe means can only be had recourſe to when the ſtrength of the patient will permit. Baths, mucilaginous diuretics, when the retention is not total, mitigate the pain, and even favour the paſſage of the ſtones. An infinite number of lithontriptic medicines have been recommended, of which we ſhall treat, under the article of calculi in the bladder.

Caſe of a Fracture of the Olecranon complicated with one of the Radius.

[By Mr. Casaubon, Surgeon à la Garenne.]

ON the 6th of October, 1789, Mr. Caſaubon was ſent for to a boy of twelve years of age, who, in falling, had received a ſhock on his left elbow: he was unable either to extend or bend the fore-arm completely, which Mr. Caſaubon attributed to the conſiderable ſwelling and ecchymoſis that ſurrounded the joint; but, on farther examination, by performing the motions of pronation and ſupination, this laſt action proved that the radius was fractured at its ſuperior part. The ulna appeared to have eſcaped injury: it was reduced, and retained in the uſual manner, with this ſlight deviation, that the turns of the bandage were carried beyond the articulation, on account of the ſwelling and ecchymoſis: to remove which, compreſſes, moiſtened in a reſolutive decoction, were applied. After theſe applications, the child was eaſier; but, as the bandage had been applied beyond the articulation, it would not admit of being ſufficiently bent to be worn in a ſling: it was, therefore, placed in a ſtate of extenſion on a pillow.

Little pain or inconvenience occurred for the three firſt days. On the fourth, the bandage appearing a little ſlack, Mr. Caſaubon took off the dreſſings, and

remarked an evident projection, about one finger's width above the condyles of the humerus, which was occaſioned by the proceſſus olecranon. Mr. Caſaubon candidly acknowledges, that he was rather at a loſs how to prevent the conſequences that would reſult from ſuch a ſerious accident. But, agreeable to the practice recommended by different authors on the diſeaſes of the bones, he preſerved it in a flex poſition. Mr. Caſaubon obſerves, that, according to the opinions of the different authors alluded to, he expected ankiloſis would be the inevitable conſequence. Fortunately the ſufferings of the patient would not admit of that degree of flexion wiſhed for by Mr. Caſaubon.

During the fourth day, the ſymptoms were mild, but extremely aggravated at night. On the next day, the ſwelling of the extremity having increaſed, the dreſſings were removed; and, at this time, Mr. Caſaubon, reflecting ſeriouſly on the future ſituation of his patient, recalled to his mind the practice that Mr. Deſault recommended, in his lectures, in ſimilar caſes, and the characteriſtic diſtinctions of this particular ſpecies of fracture. Mr. Caſaubon regulated his conduct accordingly, by extending the arm, whilſt the ſame bandage maintained the fractured parts in their ſituation. The next day, he was eaſy, and ſlept for about three hours in the courſe of the night. By the eighth day, the ſwelling had nearly ſubſided: and from that to the fifteenth the bandage was kept moiſt by the application of the lotion; and, on this day, the dreſſings were removed, when the ſwelling

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and ecchymoſis were found perfectly ſubſided. By the twenty-eighth, the bandage was reduced to a few turns, in the form of a figure of eight, ſimilar to what is uſed in bleeding. On the thirty-ſecond day, all the dreſſings were left off, and Mr. Caſaubon moved the arm frequently every day. The reſult of this treatment was completely ſucceſsful; for the patient, on the forty-third day, in the preſence of Mr. Caſaubon, executed every motion of the arm with as much eaſe as before the accident.

In this caſe, the patient was near falling a victim to the erroneous practice recommended by authors: a ſlight recollection of Mr. Deſault's doctrines pointed out the path to be followed, to which Mr. Caſaubon ſtrictly adhered. But ſtill he might have erred; and many others were in the ſame error, till the publication of Mr. Deſault's Chirurgical Journal, for which he merits the thanks of the public, for the important ſervice he has rendered to the cauſe of humanity.

Case of a Carcinomatous Affection of the Eye, with a universal Cancerous Diathesis.

[By Mr. BOULET, one of the Surgeons of the Hôtel Dieu.]

NICOLAS Richard, a wool-carder, 36 years of age, applied for admission to the Hôtel Dieu, on the 2d of November, 1790, for the extirpation of his eye, the use of which he had lost for twelve years. Two years before his admittance, the eye became carcinomatous, and was attended with acute pain, which returned at short intervals. About the same period he had an indolent tumour, that nearly filled up the epigastric region; and was tormented with wandering superficial pains, similar to rheumatic affections, which appeared successively in different parts of the body, but always of the right side.

At the time of his admission, his eye projected more than three-quarters of an inch from the orbit; its external surface was uniformly hard, of a blackish colour, with furrows in various directions, affording a considerable fœted sanies, sometimes streaked with blood. It was sufficiently insensible to allow the finger to be passed over its surface, without the patient's perceiving it, except at the great angle, where the conjonctiva was exquisitely sensible.

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The ſuperior eye-lid was red, ſwelled, and extremely painful. The tumour in the lower belly hard, and nearly indolent; it appeared to extend tranſverſely about 4 or 5 inches, and its perpendicular height to be little leſs. The patient at this time complained only of pains in the right ſhoulder, which, in eight days, were ſucceeded by a conſiderable pain in the right half of the head: at this period, the eye was increaſed in ſize, and was affected with violent ſhooting pains, which laſted five days. Theſe pains then ſubſided for a whole week; at the end of which, he was attacked with pains in his hip, then in the ſhoulder, and finally in the head. Ten weeks tranſpired, during which he was ſubject to theſe alternate attacks; and at length the abdominal tumour appeared diminiſhed in ſize, and his general health evidently improved. At this time, he conſtantly aſſured Mr. Deſault that he felt no pain. Whether this aſſertion was true, or only to induce Mr. Deſault to expedite the operation, which he ardently wiſhed for, is impoſſible to ſay.

At the end of three months, the tumour in the abdomen was diminiſhed half in ſize, and would bear conſiderable preſſure without pain. The ſtate of the eye was nearly the ſame, except that the ſuppuration was thicker and leſs in quantity. On the 106th day, his health was improved; he ſlept well, and his appetite returned: he procured by ſtealth, in the evening, ſome indigeſtible food. He had no complaint in the evening, nor in the morning, at the uſual time he was viſited; but, about ten o'clock, he felt himſelf very

uncomfortable, and could eat no dinner: he was ſoon after attacked with a ſyncope, which was only momentary: he walked in the ward in the afternoon, but a new fainting-fit coming on, he was put immediately to bed. On the evening viſit, he complained of a violent pain in his head, the pulſe was ſmall and intermittent, and in the night he was attacked with vomitings, and expired a little before morning, on the 107th day, after his admiſſion on the 16th of February, 1791.

Appearances on Diſſection.

The tumour of the eye was immediately examined, which was an enlargement of the globe, and ſo completely diſorganiſed, that it appeared a ſhapeleſs inſenſate maſs, of a blackiſh colour, and of the conſiſtence of liver.

On the opening of the abdomen, we found the liver of an extraordinary ſize; it puſhed the diaphragm upwards, and deſcended conſiderably below the ribs. The left ſide occupied all the anterior part of the epigaſtric region, and part of the left hypocondrium; its ſurface was rendered rough by tubercles of different colours, moſt of them blackiſh, but ſome verging towards yellow; and all including a ſubſtance, ſimilar to that generally diſcovered in cancerous affections of the breaſt: the internal ſurface of the lobe was covered with ſimilar tubercles.

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There were alſo tubercles, though in leſs quantity, on the ſurface, and in the ſubſtance of the great lobe of the liver, a part of whoſe convex ſurface adhered to the peritoneum. The lobulus ſpigelii was little increaſed in ſize, but appeared wholly compoſed of this ſpecies of tubercle. The little omentum was changed into a ſimilar maſs: it was nine inches in length, ſix in thickneſs, and on its internal ſurface there were ſome gangrenous points: the great omentum was alſo covered with theſe tubercles, many of them two inches in diameter; they were alſo diſcovered along the arch of the colon and the great curvature of the ſtomach. The meſentery was covered; and ſo many were attached to the inteſtines, that they appeared to take place of the appendices epiploicæ. A tumour of the ſame nature, and three inches in diameter, was attached even to the body of the bladder, and was elevated above the pubis. Another of the ſame ſize was found on the body of that viſcus, and both covered by the peritoneum. A great quantity of ſimilar tumours, but ſmaller, were diſcovered at the inferior part of the rectum, and occupied nearly a fourth part of the cavity of the pelvis.

The right kidney, though twice its natural ſize, was healthy in its appearance. On the left ſide, there was neither kidney, renal, artery, ureter, or any trace that theſe parts had ever exiſted, except the glandula renalis, which adhered to the left extremity of the pancreas.

On the ſurface of the lungs, tubercles of the ſame deſcription were found as were diſcovered in the abdomen, but ſmaller, and leſs in number. There were two attached to the heart, each half an inch in diameter; one attached by a pedicle to the origin of the aorta, and the other to the commencement of the pulmonary artery.

Fractures of the Clavicle.

[By Mr. GARNIER, Surgeon to the Hôtel Dieu.]

ON the 14th of January, 1791, Andrew Privé a carman, aged 48, fell from his horſe, and pitched on his ſhoulder; a ſurgeon in the neighbourhood was ſent for, who proceeded to the reduction in the following manner: The patient was ſeated on a low ſtool, and an aſſiſtant was deſired to keep the trunk fixed, by placing his knee between the ſhoulders, and drawing the arm backwards: the cavity above the clavicle was filled with tow dipt in a mixture of warm wine, brandy, and the white of an egg. The bandage, in the form of a figure of 8, was then applied, but without procuring eaſe to the patient; which gave riſe to a ſuſpicion that it was not reduced,

reduced, or, at leaſt, that it was not properly retained in its ſituation: after two days, finding his pains not diminiſhed, he came to Paris. The fractured portions of the bone were ſo imperfectly maintained in their ſituation, that, during his walk, he was obliged to ſupport them with his right hand, to prevent their being bruiſed or diſplaced; and when, from fatigue, he could no longer keep up this preſſure, the pain became inſupportable. When arrived at his maſter's houſe, he went to bed, and paſſed the night without ſleep. The 18th of January, he came to the Hôtel Dieu, where the fracture was diſcovered by the following ſigns: the head was inclined toward the fractured ſide, the ſhoulder drawn downwards by the weight of the humerus, and forwards by the actions of the pectoral muſcles and the ſerratus major anticus. The fragments of the bone rode over each other, the ſternal portion was carried forwards and upwards, and the humeral portion backwards and downwards. By elevating the arm, the crepitus was diſtinctly felt; and, by moving the fractured portions in different directions, the ſplintered portions of the ſcapular portion of the cavicle were eaſily diſtinguiſhed by their particular mobility.

Mr. Deſault, convinced from experience that the methods he employs for the retention of this fracture were adequate to its reduction, deſired the patient to ſtand, while an aſſiſtant elevated the arm ſufficiently to bring it perpendicular to the axis of the body; then applied to the ſide of the breaſt a pad, made of old linen, as long as the humerus, in the form of a

wedge,

wedge, the width of which was from 4 to 5 inches; and the baſe, which was 3 inches thick, was placed in the axilla, and retained in that ſituation by means of a bandage 5 or 6 ells in length, and 3 fingers breadth: one end was applied to the middle of the pad, and confined in that ſituation by two circular turns round the body, then paſſed before the breaſt above the right ſhoulder, then behind, and afterwards under; the roller was then brought horizontally before the breaſt on the pad, then obliquely upwards behind the breaſt, on the right ſhoulder, juſt forwards, and then under; then it was carried horizontally behind the breaſt on the pad, and continued in the ſame way till the whole bandage was expended.

The ſurgeon ſupported the pad in the axilla with one hand, and, with the other, elevated the elbow, ſo as to bring the ſcapular fragment of the clavicle in contact with the ſternal portion, preſſing the pad againſt the breaſt; making with the arm, by this method, a lever of the firſt ſpecies, by which means the arm was brought from the trunk, and the clavicle kept in a ſtate of extenſion.

An aſſiſtant was deſired to retain the arm in this ſituation with one hand, and, with the other, to ſupport the fore-arm, bent in a horizontal poſition; the palm of the hand applied to the anterior part of the breaſt. By this plan of treatment, the bones were brought in their natural ſituation, and in ſuch an exact ſtate of appoſition, that no irregularity or deformity remained.

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The arm was retained in this poſition by a bandage of 6 or 7 ells in length and 4 fingers in breadth; the end was applied before the right axilla, and brought horizontally before the breaſt, on the ſuperior part of the arm, behind the breaſt, and under the axilla: this firſt turn of the bandage was farther ſecured, by being twice paſſed in the ſame manner: the turns were then reflected over each other, and expanded on the breaſt and the reſt of the arm; and, as it approached near the elbow, the bandage was drawn tighter, and paſſed in circular turns round the fore-arm, and pinned to that part.

The corners of the pad were pinned to the upper part of the bandage, and the hand received an additional ſupport by the middle of a compreſs, the ends of which were pinned to the anterior part of the bandage; the vacuities above and below the cavicle, were filled with lint; and the fractured portions covered with compreſſes, dipt in aq. veg. which were doubled, and ſeven or eight inches in length, and three wide.

Under the right axilla, the end of a bandage, ſeven or eight ells in length, and three fingers wide, was applied, and paſſed obliquely above the breaſt, on the compreſſes which covered the clavicle, behind the ſhoulder and the arm, under the elbow, (which the aſſiſtant ſtill continued to ſupport,) then obliquely upwards before the breaſt, and under the right axilla. Over the firſt turn of the bandage it was paſſed three times preciſely in the ſame way, and the remainder of the bandage, brought from behind forwards under

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the right axilla, was expended in circular turns, paſſed from the right to the left on the arm, and round the breaſt, to fix the firſt part of the bandage, and to carry back the arm that correſponded with the fractured clavicle: particular attention was paid to prevent the bandage getting looſe, by ſecuring it in different parts by means of pins.

The patient was ſo perfectly eaſy the next day, that no particular regimen was deemed neceſſary. The third day, the bandage becoming looſe, it was re-applied exactly as before. On the 18th day, the fracture was firmly united; but, as there had been ſplinters, it was thought prudent not to leave off the dreſſings immediately. On the 21ſt, they were totally omitted, and, on the 30th, the patient left the hoſpital perfectly well, without the leaſt deformity, and with the uſe of his arm as perfect as before the accident.

CASE II.

MARGARET Perain, of Paris, aged 28, was thrown down by a horſe on the 28th of April, 1789. She pitched on her right ſhoulder on a part of the pavement that was higher than the reſt, and fractured the clavicle at both its curvatures. The ſame bandage, &c. was employed as in the laſt-mentioned

mentioned caſe; with this difference, that a ſplint was placed the whole length of the clavicle, to prevent the middle portion being depreſſed by the bandage. In the ſpace of 21 days the patient was cured, and without the leaſt deformity.

CASE III.

MARY Catharine Purlet, 15 years of age, fell on her left ſhoulder, on the 27th of May, 1789. Three days after the accident ſhe went to the Hôtel Dieu, and, on examination, it was found that the middle part of the clavicle was fractured in a very ſingular manner; as the ſcapular portion projected above the ſternal. This fracture was reduced and retained in the ſame way as in the preceding caſes; with this difference, that the ſhoulder was leſs elevated, and a thicker compreſs was placed on that part of the bone that was next to the ſhoulder, and ſecured by more turns of the bandage than uſual. The clavicle was firmly united by the 15th day, without any deformity.

CASE IV.

PETER Louis Grule, of Paris, received a kick from a horſe on the right ſhoulder, which knocked him down. Notwithſtanding the pain and inconvenience that he ſuffered, he continued his ordinary occupation, nor did he apply to the Hôtel Dieu till 5 days after the accident, which was on the 2d of December, 1789. Though the ſwelling was conſiderable, the fracture was eaſily reduced, and, by attending to the ſame plan of treatment, was cured without deformity in 21 days.

CASE V.

MARY Jeanſſont was thrown down, by a carriage, in the ſtreet; and applied to the Hôtel Dieu for a fracture of the right clavicle, accompanied with contuſion about the middle of that bone. She was treated after the ſame manner as the patients in the preceding caſes; and was diſmiſſed, on the 25th day after the accident, without a ſingle trace of the fracture.

CASE

CASE VI.

IN the ſame manner Francis Beauval was treated; who, at 60 years of age, had the humeral portion of his left clavicle fractured, from a ſhock he received on the ſhoulder. The ſternal portion projected forwards, and the acromion was carried backwards and downwards; the fracture was reduced and retained as uſual: but, on the 24th day, the patient deranged the dreſſings, and diſplaced the fragments, which were not yet perfectly united. He was cured, however, without any deformity, and diſcharged the hoſpital on the 48th day.

CASE VII.

THE 12th of June, 1789, Mary Anne Aubry, of Paris, aged 59, fell down ſtairs, and fractured the middle part of her clavicle. She came the next day to the Hôtel Dieu, and, on examination, the bones were found to ride over each other above two inches; and, beſides this accident, ſhe had a conſiderable wound on the head, accompanied with violent

lent contuſion, which was followed with formation of matter. Although this fracture was properly retained and reduced, yet the fragments admitted of motion on the 48th day, nor were they perfectly united till the 56th.

CASE VIII.

JOHN Beaudelot, aged 41, fractured his clavicle, near the ſcapular extremity, in falling from a ladder on his ſhoulder: he came to the Hôtel Dieu on the 20th of October, 1789, three days after the accident. This patient was impatient and untractable, and frequently diſplaced the dreſſings; which did not, however, prevent the union of the fracture, of which no trace was left on the twenty-fifth day after its reduction.

CASE IX.

THE caſe of Frances Ayard, of Rouen, aged 58, who had been thrown down in a crowd on the 24th of May, 1790, was ſomewhat different. Her clavicle was fractured, and conſiderably ſplintered; the reduction and union were completed, however, without difficulty;

difficulty; but the patient, reſtleſs and impatient, took the dreſſings off the next day, and diſplaced the fractured extremities. She purſued the ſame conduct of diſplacing the bandage, &c. till the 16th day, when ſhe became more tractable; and an attempt was made to diſplace the ſcapular part of the clavicle, which was a little depreſſed under the ſternal portion of that bone, without ſucceſs, as the callus was perfectly formed.

CASE X.

MARY Tombon, 40 years of age, fractured her clavicle in falling from a chair; the fracture was well retained till the 10th day, when, believing herſelf cured, ſhe removed the dreſſings. The fracture was diſplaced and again reduced; but, ſtill continuing intractable, ſhe would make uſe of her right hand, which looſened the bandage: ſhe was puniſhed for her imprudence; for, though the fracture had united by the 32d day, the humeral portion was depreſſed below the ſternal, and united at an angle.

CASE XI.

A woman, 77 years of age, fractured her left clavicle about the middle, in attempting to carry a burthen of wood on her ſhoulder. The pain diſappeared the inſtant it was reduced, the dreſſings were not diſplaced, and the fracture was conſolidated on the 12th day.

CASE XII.

JOHN Teſſier, 60 years of age, received a blow with a ſtick on the left ſhoulder, on the 19th of January, 1789. The reſult was a fracture of the clavicle, the ſame as the preceding: it was perfectly united by the 34th day.

CASE XIII.

GENEVIEVE Audinet, 70 years of age, was thrown down by a horſe, and fractured her right clavicle. The dreſſings were not diſplaced; and, on the 28th day, the fracture was perfectly firm and united.

CASE

CASE XIV.

MARY Leclerc, the ſame age as the preceding, fractured her left clavicle about the middle, in falling down ſtairs. She was admitted into the Hôtel Dieu on the 24th of Auguſt, 1788, two days after the accident. In 25 days ſhe was diſcharged perfectly cured.

CASE XV.

MARY Nivet, of Paris, 75 years of age, fractured her clavicle on the 29th of July, 1788. During the treatment of her caſe, ſhe was frequently attacked with affections of the primæ viæ, colics, &c. occaſioned moſt probably by a large umbilical hernia, which ſhe had for a conſiderable time, and was at this period irreducible. Theſe circumſtances, together with her advanced age, were no impediment to the perfect reunion of the fracture, which took place on the 22d day.

Obſervations on Fractures of the Clavicle.

THE fracture of the clavicle occurs more frequently, and is more obvious, than any other ſpecies of fracture; and yet, by a ſingular fatality, its treatment is leſs underſtood. Since the time of Hippocrates, to the preſent day, authors have done little more than copy one another on this ſubject.

The attention of the Greek phyſicians was directed to the projection generally formed by the ſternal fragment, which they conceived ſhould always be depreſſed to the level of the humeral portion; and they endeavoured to accompliſh this object by mechanical means; ſuch as the application of lead, or thick compreſſes, retained on the clavicle by means of bandages. Such was the method employed, till the inſufficiency and bad tendency of this practice was pointed out by Hippocrates; who, being more accurate and attentive in his obſervations than his predeceſſors, remarked that the projecting portion of the ſternal portion was in fact not more elevated, but that this appearance aroſe from the humeral portion being depreſſed, in conſequence of being drawn down with the ſhoulder, and that conſequently our endeavours ſhould be directed to raiſe this portion on a level with the other. Such are the principles on which his doctrines and practice were founded; he recommends

recommends the arm to be brought to the ſide, and the ſhoulder to be elevated, ſo as to form an acute angle, and to be maintained in that ſituation by a proper bandage. This plan, according to our author, will tend to bring the ends of the bone in a ſtate of appoſition, and procure their reunion*, at leaſt it will effect this when the humeral portion is depreſſed below the ſternal, which is generally the caſe. But this method will not always completely ſucceed; for inſtance, when the bones ride over each other, or when the ſcapular portion is forced backwards. In theſe caſes, Hippocrates recommends the patient to be laid on a hard body, (a plank, for inſtance,) and his ſhoulders to be drawn backwards with ſome degree of force, and maintained in this ſituation by a ſort of ſpica bandage. If the ſcapular fragment ſhould project forward, he recommends the elbow to be brought forward on the breaſt, and the palm of the hand to be applied againſt the oppoſite ſhoulder. And, with reſpect to the caſe, which very rarely occurs, of the ſcapular portion projecting above the ſternal, he ſays nothing, as the weight of the ſhoulder is alone ſufficient to bring it to its former ſituation.

What Paulus Æginetus ſays on fractures of the clavicle ſeems to be a commentary on the text of

* Quod ſi quis brachium, quàm maximè ad latus adductum ſurſum propellat, ſic ut quam acutiſſimus humerus appareat, eo modo planè continget, ut cum oſſe quod pectore adhæret, unde eſt avulſa adaptetur.

Hippocrates; he makes his extenſion by carrying the arm upwards and outwards. In certain caſes, he places a compreſs between the ſhoulders, whilſt an aſſiſtant draws them backwards, and then applies the ſpica bandage; he alſo mentions, that the arm ſhould not be ſupported, but left hanging to the ſide, when the humeral portion is more elevated than the ſternal; in a word, his ideas and practice are preciſely the ſame; the only circumſtance in which he varies is the recommending a ball to be placed in the axilla, to make a more forcible extenſion, when the means recommended by Hippocrates are inadequate to the reduction.

Albucaſis, the author, who revived ſurgery among the Arabians, borrowed of Paulus Æginetus the idea of placing a ball in the axilla, and the uſe of the figure-of-8 bandage: he kept the ſhoulder conſtantly elevated, and ſupported the arm in a ſling during the day, which he fixed, in the day, to the neck of the patient, and ſupported it, at night, by placing a pillow under the axilla.*

Lanfranc and Gui de Chaubac have only tranſcribed what has been ſaid by the above-mentioned authors: the laſt, inſtead of laying the patient on a thick pillow, attempts the reduction, by applying the knee between the ſhoulders of the patient; (agreeable to moſt modern practitioners, who have imitated this practice;) and, if the depreſſed portion was not

* Pono ſub titillico dormientis in nocte pulvinar parvum, ut elevetur cum eo brachium aut liga brachium ad collum ejus.

by

by this means ſufficiently elevated, he recommended the application of an agglutinative plaſter to produce this effect, a doctrine ſo abſurd that we are aſtoniſhed to find it mentioned by ſome modern authors.

Pecceti has gone farther than preceding writers, whoſe works he has attentively conſidered, and from whom he has frequently tranſcribed; for, he recommends the ball to be left in the axilla during the whole treatment, but ſtill uſes the figure-of-8 bandage.

Subſequent writers have only commented on thoſe authors we have recited; but, as the greateſt part were not practitioners, they have omitted the explanation of one part of their doctrine, the moſt eſſential of all.

The ball, which, with Paulus Æginetus, Avicennus, and Albucaſis, was the principal means of reduction, has been viewed only by the moderns as merely a means to fill up the axilla, to prevent the parts being excoriated from the application of the bandage: but this is not the only error in which they have fallen, the fracture of the clavicle was invariably followed with more or leſs deformity, a remark generally made: but moſt ſurgeons, miſlead by a falſe theory reſpecting the union of fractures, conceived it was impoſſible to ſurround the clavicle by a bandage that would prevent the irregular ſhooting of the collus. Some, however, obſerved that the bandage of the ancients, then in uſe, did not prevent the motion of the fractured portions; but the means that they ſub-

ſtituted, adopted, and on the ſame principles, were not found to anſwer the intention.

The iron croſs of Heiſter and of the author of *La Chirurgie complette*, the compreſs by which Mr. Petit kept the ſhoulders backwards, and other contrivances, are only different modifications of the figure-of-8 bandage: the inconveniences and inſufficiences of which are demonſtrated by every modern author; and, indeed, it is unneceſſary to reaſon on the ſubject, as we find, from experience, it is abſolutely inadequate to produce the effect we wiſh; and, indeed, in the opinion of all ſurgeons, no bandage has been yet contrived to retain the fractured parts ſufficiently to prevent deformity and pain.

Mr. Deſault, firmly perſuaded that a conſtant ſtate of extenſion was abſolutely neceſſary to keep the parts in a ſtate of immobility and procure their reunion, invented, in 1768, a bandage that completely anſwered this indication; which, as deſcribed in Caſe I. ſome perſons have conceived that it is to be found in Paulus Æginetus. This author certainly accompliſhed the reduction when it was difficult, by bringing the elbow on the breaſt, and ſeparating, at the ſame time, the ſuperior part of the arm, by means of a thick ball placed in the axilla; but, from his own account, we learn, that he did not keep up this means of extenſion during the whole treatment. He, indeed, adds, in a few lines, that, after the reduction of the fracture, being covered with thick compreſſes, a ball of wool ſhould be placed in the axilla, and the bandage

dage ſhould paſs, under both axillæ, on the fractured clavicle, ſcapula, &c.

After * the application of this bandage, it is evident that placing a ball of wool in the axilla was merely to furniſh a point of ſupport to the bandage, which, without this precaution, would have paſſed only over thoſe parts where the muſcles project; and, what farther confirms this idea is that the author employs no method to keep the arm cloſe to the trunk, but reſts ſatisfied with ſuſpending it to the neck by the means of a leather ſtrap, and ſupporting the fore arm in a ſling in the ſame way as after bleeding. Pecceti recommends the ball that was uſed in the reduction to be kept in the axilla, but ſtill we do not ſee his direct indication, as he employs, like his predeceſſors, the bandage of the figure of eight, and ſays nothing of the manner of retaining the ball, nor of the neceſſity of keeping the arm cloſe to the trunk.

Mr. Deſault's bandage is ſimple although it may require ſome attention in the application: its mode of acting is obvious. — The cuſhion, or compreſs, which acts as a ſupport to the internal ſurface of the arm, is ſhaped in ſuch a manner, that, at the time the elbow is brought cloſe to the breaſt, the ſuperior part of the arm is ſeparated ſome diſtance from the body. — The

* Quod ſi ampliore opus fuerit extenſione globum ſatis magnum alæ ſubjicito, et cubite flexuram ad coſtam, quæ ad ipſum eſt adducito, et congruo ex lanâ globo alæ ſubjecto propinquæ (claviculæ factæ) convenientem inducimus delegationem per alas, et affectam clavículam et ſcapulam prout convenit deligationes ducentes. — De Re Med. Lib. vi. cap. xciii.

arm,

arm, carried outwards, drags the ſhoulder at the ſame time, and with it the ſcapular portion of the fractured clavicle, which would have been carried inwards by the pectoral muſcles, the ſeratus major anticus, and the ſub clavius, if their action had not been oppoſed by the thickneſs of the ſuperior part of the cuſhion. The circular turns of the bandage, which fix the arm againſt the breaſt, have the double advantage of keeping up the extenſion* and preventing at the ſame time the motions of the arm and ſhoulder, and, conſequently, retaining the portions of the fractured bone in a conſtant ſtate of appoſition. The elevation of the arm tends to place the humeral portion of the clavicle on a level with the ſternal; and the turns of the bandage, paſſing at one part under the elbow and fore arm, and at another part on the fragment that is moſt elevated, which it depreſſes, and raiſes the other, bringing their ſurfaces oppoſed to each other. This bandage ſerves to confine the actions of the trapezius and ſterno-maſtoideus, which are attached to this bone. With reſpect to the ordinary time for the conſolidation of the fracture, Hippocrates fixes it from fourteen to twenty days; Albucaſis, from twenty to twenty-four or twenty-eight; and this calculation agrees nearly with the reſult of our own obſervations.

* There is no reaſon to apprehend any ill conſequences will ariſe from the compreſſion of the brachial veſſels and nerves, as they paſs anterior to that part of the humerus that is ſupported by the pad.

Caſe of Retention of Urine, produced by Obſtructions in the Urethra.

[By Mr. Cagnion, Surgeon to the Hôtel Dieu.]

NICOLAS Haubet, 52 years of age, went to the Hôtel Dieu, at Paris, on the 18th of June, 1790, to conſult the ſurgeon in chief for a complete ſuppreſſion of urine. In being queſtioned reſpecting the origin of this complaint, he mentioned, that he had a gonorrhea 12 years before, that he had taken mercurial pills, but was not perfectly cured, and ſubject, afterwards, to habitual ſmartings, which, were ſucceeded by real pain, and, at length, a diſpoſition to contraction took place in the urethra, and, in proportion as this increaſed, the ſtream of urine diminiſhed. His complaint brought on dyſuria, and, at intervals, ſuppreſſion of urine. After examining the patient in the theatre, Mr. Deſault, perceiving a urinary tumor in perinæo, had no doubt of the exiſtence of obſtructions in the urethra. To aſcertain this with certainty, he introduced a middle-ſized ſilver catheter: the inſtrument was tightly embraced by the urethra about its orifice, and a ſtricture was felt about one inch from the meatus urinarius. By a ſlight degree of force, the inſtrument was paſſed on as far as the membranous part of the urethra, which correſponded to the tumour in perinæo. At this part new ſtrictures were diſcovered, which afforded the greateſt reſiſtance.

As

As the patient intended to remain in the Hôtel Dieu, Mr. Deſault thought proper to defer any farther attempts till he was put to bed, which was immediately done: and, after paſſing the catheter, though it did not penetrate into the bladder, he voided a conſiderable quantity of urine. In the next attempt, Mr. Deſault introduced a catheter with a ſmall curvature, ſuch as is uſed for children, as far as the ſtricture, which could not be paſſed by the other inſtrument. When the catheter arrived at this part, Mr. Deſault turned it gently on its axis, puſhing it at the ſame time againſt the reſiſting part; by this action, forming a ſort of boring motion, Mr. Deſault ſucceeded in the introduction of the catheter in the bladder. As ſoon as the urine was evacuated, the orifice of the inſtrument was ſtopped up by a cork, and two ſmall tapes were paſſed through the rings at the ſides of the catheter, and paſſed behind the buttocks, then brought forward to the ſides of the pelvis, where they were fixed to a circular bandage that was paſſed round the body. A light diet, with linſeed tea, was ordered. He paſſed the next night more quiet than uſual, the urine flowed freely through the catheter, the cork of which was withdrawn whenever he was diſpoſed to make water. The bladder now evacuated itſelf extremely well, which was not the caſe previous to the introduction of the inſtrument. The next day he was as well as the evening before; the tumour in the perineum had diminiſhed one half. Particular care was taken to fix the catheter properly without depreſſing it too much, which would have produced irritation in that part of the urethra

thra that correſponded to the anterior part of the ſcrotum: by this attention, the inconveniences reſulting from theſe kind of catheters are avoided; for, when left long in one ſituation, they irritate the urethra by their preſſure, and ſometimes produce fiſtulous abſceſſes. — In the night he was attacked with ſome pain and ſhivering, which interrupted his reſt. As this circumſtance might be attributed to the preſſure of the catheter, which was now looſe in the urethra, it was withdrawn and replaced by one made of the elaſtic gum, with a ſmall orifice, furniſhed with a ſteel probe, and bent in the uſual manner. Previous to its being paſſed, Mr. Deſault, agreeable to his uſual practice, ſmeared it with ſuet, to defend it longer from the action of the urine; the eyes, or little holes, at the end of the catheter, were filled with the ſame ſubſtance; by this means, the ſurface of that part was rendered leſs rough, and theſe orifices prevented from being filled with pus or mucus during its introduction, which would have obſtructed the urine: the catheter was fixed by ſome threads twiſted together in the form of a ligature, and ſecured by knots to its middle, about two lines from the glans; the ligature was then carried above the corona glandis and ſecured by a ſingle knot, and the ends afterwards paſſed down by the ſides of the glands to the frœnum, and there fixed by a ſimple knot, afterwards reflected under the penis, and ſecured by a third knot to the extremity of the bougie. After its introduction the patient was perfectly calm, and, on the fifth day, the tumour of the perinæum had nearly ſubſided, a little hardneſs only remaining: the

urine

urine flowed freely through the catheter, which was now more loose in the urethra, in consequence of the abundant suppuration excited by its presence. On the 6th, it was replaced by a bougie of the same kind, but larger; on the seventh day, the hardness of the perinæum had nearly subsided, and an abundant quantity of puriform matter was discharged from the urethra.

On the 8th, suppuration was perfectly established; and, between the 8th and the 11th, the discharge from the urethra was abundant and of a good quality, and the strictures in the passage obviously resolving: this was proved by the re-introduction of the sound, which had been withdrawn to be cleaned.

On the 11th, there was a slight degree of fever with a furred tongue. By the use of a light diet with whey, and a few clysters, the patient recovered in four days.

The suppuration in the urethra continued nearly the same, till the 23d day.

It is necessary to withdraw the catheter every 6 days, to clean it; for, there is reason to apprehend its cavity would be obstructed by glairy matters, furnished by the internal coat of the bladder, or that incrustations would form both inwards and outwards, which would necessarily occasion the most distressing pain in withdrawing the instrument. Every two days the ligatures should be re-applied, and with some little variation with respect to their situation, to avoid excoriation, &c. which would be occasioned by their constantly pressing on one place.

From

From the 23d to the 29th, his diet was enlarged, and the catheter became every day more and more looſe. On the laſt-mentioned day, a conſiderable looſeneſs came on, which was checked by decoction of rice, with the ſyrup of quinces. The ſuppuration having ceaſed and the hardneſs ſubſided, the cure was ſuppoſed to be complete on the 33d day, conſequently the catheter was withdrawn, to ſee if the urine flowed in a full ſtream. It paſſed freely, but ſtill, as ſome ſmarting yet remained, it was introduced again, and worn for ſeven days. This was the forty-ſecond day from his admiſſion into the Hoſpital, and, at this period, the urethra was perfectly free from obſtruction, and the ſtream of urine as large as in the natural ſtate.

Of Retention of Urine in the Bladder.

RETENTION of urine in the bladder is occaſioned by that viſcus being incapable of expelling its contents: it has been deſcribed by the ancients, as already obſerved, under the generical name of iſchuria.

Some authors have diſtinguiſhed this diſeaſe from dyſuria and ſtrangury, which they have conſidered as diſtinct diſeaſes, others have confounded theſe affections and conſidered them as only retentions of different

ferent ſpecies. They have called it dyſuria when the urine is diſcharged with pain and difficulty, ſtrangury when it comes away drop by drop, and iſchuria when it does not paſs at all. Theſe different diſeaſes being only degrees of the ſame complaint, we ſhall divide them into two ſpecies, complete and incomplete.

The urine is retained in the bladder by its coats, admitting of diſtenſion; and, when its muſcular coat is diſtended beyond its tone, it affords little reſiſtance to dilatation, and ſometimes it will be diſtended to a conſiderable ſize. The bladder of a child 18 months old has been found to contain a pint of urine, and that of an adult 6 or 7 pints, occupying not only the cavity of the pelvis, but mounting upwards in the abdomen even above the umbilicus: ſometimes it paſſes acroſs the abdominal rings forming ſcrotal hernia, and ſometimes under Poupart's ligament into the groin. Theſe caſes certainly are rare, but they have occurred, and many inſtances may be found in the memoirs of the academy of ſurgery. In general caſes of ſuppreſſion of urine, the bladder preſerves nearly its natural form; when diſtended, the different parts do not dilate in the ſame proportion; its inferior part ſtretches more than the ſuperior, it becomes wider and deeper, preſſing the perinæum forwards, and in women the vagina backwards, and in men the rectum, forming tumours in theſe parts, partially or totally compreſſing their cavities and obſtructing the paſſage of the fœces.

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The poſterior part of the external tunic of the bladder is covered with peritoneum, which is reflected backwards and upwards on the inteſtines, and continued on throughout the cavity of the abdomen. Its upper part, where it riſes above the pubis, glides, as it may be ſaid, between the peritoneum (which it raiſes) and the abdominal muſcles. The anterior and ſuperior part, forming a tumour in the hypogaſtric region, comes in contact with the bare recti and tranſverſales muſcles, to which it is attached by ſlight cellular ſubſtance.*

In bladders that have been much diſturbed, faſciculi, or fleſhy columns, have been often found ſeparated by cells or pouches, in which calculi have frequently been found.

When the bladder has been diſtended by urine as much as it will admit, and the reſiſtance of the urethra not overcome, it ſtops in the ureters; which, in their turn, admit of dilation. The valvular opening of communication between the urethra and bladder diſappears, and is ſometimes near an inch in diameter; and, at laſt, when the ureters are completely dilated, by degrees the urine is retained in the kidneys, and ſuſpends the ſecretion. We can eaſily form a diagnoſtic of this diſeaſe. Its characteriſtic ſigns may be divided into rational and ſenſible. The rational ſigns are numerous, but, for the moſt part, equivocal; ſuch

* An accurate knowledge of the anatomy of theſe parts is eſſentially neceſſary for the ſurgeon; for, the bladder may be opened in ſuppreſſions of urine without wounding the peritoneum.

as a defect in the evacuation of the urine for one or more days; its diſcharge guttatim, or in ſmall quantities at a time; a continual deſire to make water, which continues even after the patient has evacuated the natural quantity; the force and the ſize of the ſtream of urine is diminiſhed; a ſenſe of weight in the perinæum teneſmus, conſtipation, and hæmorrhoids. To theſe may be added ſharp pains in the hypogaſtric region, propagated along the courſe of the urethra as far as the proſtrate. Both regions of the kidneys are ſucceſſively affected, and theſe ſymptoms are ſometimes accompanied with ſtupor and numbneſs of the thighs; theſe pains are aggravated by walking, coughing, or by an erect poſition of the body; and diminiſh by bending the trunk, and thus relaxing the abdominal muſcles.

To theſe pathognomonic ſigns may be alſo added fever, nauſea, laborious reſpiration, urinous ſweats, and other ſymptoms, which have been mentioned in treating of ſuppreſſion of urine; which is always the conſequence of complete retention, when it has exiſted for ſome days. Theſe ſymptoms are individually mentioned, only to ſhew their uncertainty; when united, there is more or leſs probability of the exiſtence of retention. A certainty can only be acquired by ſenſible proofs, joined to the circumſtances above-mentioned; ſuch as tumours above the pubis, formed by the bladder; tumours in the rectum, in men; and, in women, in the vagina.

Tumours in the bladder vary much in their dimenſions; ſometimes they extend above the umbilicus,

and

and are circumſcribed without hardneſs of the circumference, and the colour of the ſkin unchanged; wider at the inferior than at the ſuperior part; hard; not very ſenſible to the touch, unleſs forcibly preſſed, which excites and increaſes the deſire to make water, and ſometimes will produce the evacuation of a few drops. A tumour in the rectum or vagina is eaſily diſtinguiſhed by the introduction of the finger into theſe cavities. It is ſituated anteriorly; and, like the tumour in the hypogaſtric region, hard, equal, and without any particular induration; but the fluctuation is the particular pathognomonic ſymptom, which merits the attention of the practitioner, or rather an undulating feel, which is experienced by examination with the fingers. But theſe tumours do not conſtantly exiſt; and even complete retentions have taken place, where the bladder would not admit of diſtention, and a few ſpoonfuls have been only contained in its cavity.

Retention of urine in the bladder is always a ſerious diſeaſe, and, when complete, demands immediate aſſiſtance; which if not obtained, the worſt conſequences may be apprehended. The bladder, when diſtended for a conſiderable time, loſes its elaſticity, and is recovered with difficulty; the conſtant irritation kept up by the urine (which, in conſequence of long retention, becomes acrid and corroſive) produces inflammation, and a putrid gangrenous ſuppuration; ſometimes it makes its way through the bladder, and is diffuſed in the cellular ſubſtance, in the cavity of the pelvis, under the

peritoneum as far as the region of the kidneys. Sometimes it is effuſed under the ſcrotum, the common integuments of the penis, and under the ſuperior part of the thighs. The urine has been even known to inſinuate itſelf as high up as the ſides of the thorax, forming abſceſſes, generally followed with gangrene and fiſtulous openings; and, to theſe ſymptoms, the conſequences of re-abſorption and ſuppreſſion may be added. Amongſt the numerous cauſes productive of ſuppreſſion of urine, two deſerve particular conſideration. Firſt, weakneſs of the bladder: ſecondly, the reſiſtance the urine experiences in its paſſage through the urethra.

Retention of Urine, occaſioned by the Weakneſs of the Bladder.

EXPERIENCE and obſervation confirm this as a cauſe of retention.

We learn, from phyſiology, that the contraction of the bladder is abſolutely neceſſary for the expulſion of the urine; which action is certainly aſſiſted by the abdominal muſcles and diaphragm, though not wholly to be attributed to their means. A number of well atteſted caſes can be adduced to prove, that the urine has been retained, without any other obſtacle to its expulſion; and a decided proof of this cauſe of

retention

retention is the facility with which a ſound may be introduced into the bladder. This general cauſe of retention comprehends many others, among which we may rank old age, debauchery, abuſe of diuretics, affections of the brain and ſpinal marrow, inflammation and diſtention of the bladder beyond its tone, a rheumatic pſoric affection of its coats, &c.

Retention of Urine from Old Age.

OLD men are ſo ſubject to retention of urine, that this diſeaſe has been mentioned as one of the inconveniences incidental to that period of life. The bladder, like the other parts of the body, becomes leſs irritable, is not ſuſceptible of ſtimulus by the urine, nor is apprized of the neceſſity of evacuation, but by the painful ſenſations that reſult from the diſtention of its coats. It then contracts on its contents; but the elongated fibres have ſcarcely force ſufficient to overcome the natural re-action oppoſed to them by the urethra; and the proper equilibrium of power and reſiſtance being no longer kept up, the urine can only be evacuated by the aſſiſtance of the violent contraction of the abdominal muſcles; and even then the expulſion is incomplete; the bladder does not poſſeſs a force ſufficiently contractile (like

the ſtroke of a piſton) to expel the laſt drops: theſe, remaining in the bladder, form a beginning retention. The quantity is augmented every day, and the fibres of the bladder being accuſtomed to its preſence, in the end, not half the quantity of urine contained is evacuated; all elderly people are not equally ſubject to this complaint; thoſe, that are moſt liable to its attack, are generally of a phlegmatic temperament, of a full habit of body, and of a ſtudious ſedentary diſpoſition; and they who neglect to void the laſt drops of urine, from idleneſs, hurry, &c. or who have occaſion to make water in the night, and who urine on their ſide inſtead of riſing, or effect it in a kneeling poſture.*

Theſe patients obſerve that they have never had any affection of the urethra, nor of the neighbouring parts, ſo as to impede the paſſage of the urine; that it flowed in a full ſtream, though with diminiſhed force, conſequently they could not diſcharge their urine equally diſtant as before, and that their urine, inſtead of forming an arch, fell between their legs on their ſhoes. And that, on ceaſing to make water, they did not experience the ſenſations attending the contraction of the bladder, on the laſt drops of urine, which in their youth they were accuſtomed to feel; and, when they had a deſire to make water, it was a conſiderable time before it began to flow, and then

* Mr. Deſault obſerves, that this cauſe of retention, though not ſupported by phyſiology, is confirmed by actual clinical obſervation, and that he entertains no doubt of its reality.

with

with conſiderable difficulty; the quantity evacuated each time was diminiſhed, and, at the ſame time, the deſire to make water became more frequent; at laſt the urine paſſed away drop by drop, and to this incontinence ſucceeded retention. In this ſtate the patients ſuffer little; the tumour above the pubis, formed by the bladder, is nearly indolent; and, if ſlightly compreſſed, ſome urine may be voided by the urethra.

Retention, produced by old age, is rarely complete; the urine, after diſtending the bladder, paſſes off involuntarily by the urethra, where it meets with no reſiſtance but what is natural to that canal, and, in a given time, the patient voids as much urine as in a ſtate of health. In this ſpecies of retention, we have no reaſon to apprehend the ſame train of ſerious ſymptoms that occur in complete ſuppreſſions; ſuch as in ſuppreſſion of urine in the kidneys, effuſſions in the cellular ſubſtance, &c. — We find a number of old men, who view this complaint as incidental to their age, and who do not even apply for medical aſſiſtance. The urine, however, by ſtagnating in the bladder, putrifies, forms conſiderable depoſits, and, at length, the tunics of that viſcus become altered in ſtructure. The indications of cure in this diſeaſe are to procure the evacuation of urine, and to give tone to the bladder: both effects are often produced by employing the ſame means. At the commencement of the complaint, when the bladder is perhaps only indolent, cold bodies applied to the hypogaſtric region, or to the thighs,

paſſing from a hot into a cold place, might be adviſable.

J. L. Petit mentions, that he cured a publican, by deſiring him to make water in his cellar during the day, and, in the night, to riſe bare-footed and apply the chamber-pot to his thighs. Patients ſhould be careful not to reſiſt the firſt deſire to make water; for, by inattention to this caution, the bladder becomes full; the fibres gradually loſe their ſenſibility, the deſire to make water ceaſes, and the retention, which in the beginning was only a few drops, becomes ſoon complete; when it will be too late to derive any advantage from the methods before indicated. There is no ſtimulus capable of exciting the bladder to contract, with a force adequate to produce the expulſion of the urine; and the introduction of the catheter is the only reſource. But let it be recollected, that an evacuation, thus artificially produced, procures only momentary relief. The relaxed fibres of the bladder are a long time before they recover their tone and elaſticity; and, if the uſe of the catheter is not perſiſted in, the patient relapſes into his former ſituation; which renders it neceſſary either to keep it in the bladder, or to introduce it every time the patient has occaſion to make water. The laſt method is to be preferred, if a ſurgeon can conſtantly be had, or they are able to introduce the catheter themſelves; and, as its conſtant preſence would be attended with inconvenience, it ſhould not be paſſed but when it is neceſſary to evacuate the urine; in this caſe, a ſilver catheter, or one made of

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the elaſtic gum, may be uſed to advantage; but, if it is neceſſary to remain in the bladder, the catheter of the elaſtic gum, bent in the uſual way, and furniſhed with a ſteel probe, is to be preferred. But, whatever inſtruments are employed, Mr. Deſault is convinced, from experience, that, from the flaccidity of the urethras of old men, a large catheter is introduced with more eaſe, and leſs pain, than one of a ſmall diameter.

Observation.

The catheters, that are uſed by Mr. Deſault, are ſlightly bent in one-third of their length, and are ſtrait in the remaining part; this curvature gradually takes place from the ſtrait part, and extends to the point; it is equal throughout, and repreſents a circle of ſix inches in diameter, which is the ſame in all catheters, whatever may be their ſize. Mr. Deſault, for the moſt part, prefers large to ſmall catheters: the general ſize employed for men is ten inches and a half in length, and about one-ſixth of an inch in diameter. Sometimes in adults, in conſequence of ſtrictures accompanied with induration, the catheters employed for children are obliged to be had recourſe to; which, though ſmall, will frequently not paſs without uſing force; thus it is neceſſary to make them ſtronger to prevent their bending. In theſe caſes, catheters made of gold, as being leſs flexible than

than ſilver, offer ſome advantages. Mr. Deſault, inſtead of the eyes formerly placed on the ſides of the catheters, has ſubſtituted two oval apertures, whoſe edges are rounded. All practitioners have admitted the inconveniencies that have ariſen from theſe eyes, by whom the urethra has often been enlarged and torn, producing acute pain, and ſometimes a diſcharge of blood. Mr. Petit conceived that this inconvenience could not be obviated but by ſuppreſſing theſe eyes, and ſubſtituting a circular opening at the extremity of the catheter, which was filled by a button placed at the end of the probe. The defect in theſe catheters was ſoon diſcovered; the probe, which remained in the catheter, prevented the uſe of injections in the bladder when deemed neceſſary, and obſtructed the paſſage of glairy mucus and clots of blood, which otherwiſe might be evacuated. Mr. Petit invented another catheter, the end of which was ſhaped like an olive, and pierced at its extremity; he conceived, that, in conſequence of its form, this catheter might be introduced open without injuring the urethra, but this contrivance, though ingenious, was not found by experience to anſwer the purpoſe.

Garangeot recommends the opening of theſe catheters to be cloſed by means of a probe, at the end of which is an eye, ſimilar to the eye of a needle. He recommends four or five ſmall pieces of thread to be paſſed through this aperture, to be ſecured by knots, and then the thread to be divided at two or three lines diſtance; the probe is then to be paſſed through the catheter, till the threads come

out,

out, then retracted till they come on a level with the aperture of the catheter. The whole is then to be dipt in melted ſuet; and, when you wiſh to evacuate the urine, the probe is to be withdrawn, bringing with it the threads and the ſuet.

We cannot deny that this method is ingenious, but it is not always adequate to the purpoſe for which it was invented; for, when obſtructions exiſted in the urethra, the ſuet and thread being forced into the cavity of the catheter, the edges of the aperture projected, and produced thoſe very inconveniencies it was meant to avoid.

It is certainly then, for theſe reaſons, better to adopt a method ſimple, and yet, at the ſame time, advantageous. By giving to theſe an elyptical form, and by filling them with ſuet, Mr. Deſault prevents the internal membrane of the urethra from being injured by theſe apertures. He paſſes previouſly a bougie of the elaſtic gum in the cavity of the catheter; the intention of which is only to prevent the ſuet at the oval openings from getting into the cavity of the catheter; and that, when the inſtrument is paſſed into the bladder, the ſuet may be retracted with the bougie.

The invention of the catheters of the elaſtic gum, by Mr. Bernard, is one of the moſt fortunate diſcoveries that has enriched the art of ſurgery this preſent century. Practitioners have felt the neceſſity of flexible catheters; and, till the invention of the above ingenious mechanic, thoſe that have been offered were extremely imperfect. The catheters of horn, mentioned

tioned by Van-Helmont, are too hard, and are ſubject quickly to incruſt: thoſe of leather, recommended by Fabricius Aquapende, are ſoftened by the mucus and urine bent on themſelves; and, by this means, obliterated the cavity: thoſe made of thin plates of ſilver or wire twiſted ſpirally, and covered with ſkins, are apt to get dry and rot; and, being retained on the catheter only by the ſilver wire at its extremity, are ſubject to ſtop at the neck of the bladder, or ſome other part of the canal, and get detached.

The catheters of Mr. Bernard are not ſubject to theſe objections; they are made with a ſort of ſilk or goat's hair twiſted, and covered with elaſtic gum; they poſſeſs a ſufficient degree of flexibility to adapt themſelves readily to the different curvatures of the urethra, are not ſoftened by the urine, and yet are free and eaſy in that canal: their ſurfaces, from being ſmooth and poliſhed, are not equally ſubject to earthy incruſtations as catheters in general. As theſe catheters are more particularly employed in the treatment of diſeaſes of the urethra when their introduction is often attended with difficulty, they are furniſhed with a ſteel probe bent in the uſual way. Steel is preferable for this purpoſe to copper, as they bend leſs and preſerve their curvature more exactly.

Of the Introduction of the Catheter.

There are two ways of introducing the catheter; one above, and the other under, the abdomen; in both, the patient may either ſtand or lay down, but the laſt is preferable: then he ſhould be brought to the edge of the bed with his thighs ſeparated, and the legs a little bent: the penis is then to be embraced with the ring and middle finger of the left hand, whilſt the index-finger and the thumb are applied to the glans; and, by this means, the opening of the urethra expoſed. The catheter is then to be held between the index and middle fingers of the other hand, after filling up the eyes with ſuet, and paſſed in ſuch a direction as the ſtrait part of the inſtrument ſhould be oppoſed to the abdomen, and be parallel to the axis of the body. Its extremity is to be then introduced into the urethra; and, while the penis is gently ſtretched and elongated, the catheter ſhould be paſſed ſoftly and with caution, till the point of the inſtrument is on a level with the arch of the pubis. The hand, in which the extremity of the inſtrument is contained, is then gently to be depreſſed from the ſides of the thighs, and the catheter paſſed into the bladder. If the ſurgeon wiſhes to paſs it below the abdomen, or, as it is termed, *par le tour de maître*, the catheter ſhould be held in ſuch a manner that its convex part ſhould be upwards, and the ſtrait below the abdomen oppoſite the ſpace between the thighs. It is then to be introduced into the aper-

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ture of the urethra, and paſſed on; whilſt, with the other hand, the penis is put on the ſtretch. When the point of the catheter has reached that part of the urethra that correſponds to the arch of the pubis, a ſemi-circle muſt be deſcribed from this part, and from the penis to the groin of the oppoſite ſide, and thence on the abdomen. In this movement it muſt be obſerved that the point of the inſtrument forms the centre of motion. The hand, in which the catheter is held, is then to be depreſſed, and the reſt of the operation finiſhed in the ſame manner as before. One operation, being more complicated than the other, conſtitutes the only difference, and which renders it more difficult and painful; therefore this laſt method has not been adopted by the generality of practitioners, unleſs the patients are remarkably fat, or from their poſition this mode might be inconvenient.

When there are no obſtructions in the urethra, ſurgeons, who are accuſtomed to the operation, for the moſt part, experience little or no difficulty in paſſing the catheter into the bladder; but inexperienced practitioners often create obſtacles, by not attending to the direction of the urethra, or by preſſing the point of the inſtrument againſt the ſides of the urethra, forming folds in that part. When this happens, the inſtrument ſhould be withdrawn a little way; and, after varying the direction, paſſed on. If this ſecond attempt is not ſucceſsful, and the inſtrument ſtops in perinæo, the ſurgeon ſhould paſs his hand below the ſcrotum, to find where the point of the catheter is ſituated, and attempt

tempt to direct it at the ſame time that he puſhes on the inſtrument.

If any obſtruction to its paſſage ſhould happen in that part of the canal that correſponds to the rectum, the catheter ſhould be preſſed by the index-finger, introduced into that inteſtine; and, by this means, the canal will be put on the ſtretch, by the gut being drawn downwards and forwards; but if, notwithſtanding theſe precautions, we cannot ſucceed, the catheter ſhould be changed for a ſmaller or larger, or for one of a different curvature, or the introduction of one of the elaſtic gum without the probe ſhould be attempted; but, in every caſe, we ſhould be extremely cautious of uſing too much force, for fear of lacerating the urethra, and making a falſe paſſage.

We are certain that the catheter is inſerted into the bladder, by the depth which it has paſſed; the reſiſtance at its point ceaſing when turned on its axis, and by the flow of urine.

There is a queſtion ariſes reſpecting the propriety of evacuating the urine at once, or only gradually by ſmall quantities at a time: this laſt opinion has many partiſans, who conceive that the patient would ſink under the weakneſs produced by the bladder being perfectly and ſuddenly emptied. But, agreeable to this idea, the muſcular fibres would be ſtill kept on the ſtretch, and would not regain their tone. Beſides, when the urine is only partially evacuated, depoſits are apt to form, which take on a putrid diſpoſition, and materially injure the coats of the bladder. Other practitioners have gone into the contrary extreme; and,

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by means of leaving the catheter always in the bladder, with the orifice open, the urine was evacuated as faſt as it was ſecreted. This method is alſo ſubject to its inconveniences; for, the muſcular fibres of the bladder, being always relaxed, never recover their tone and elaſticity. In addition to this objection, Mr. Deſault obſerves, that the empty bladder, being preſſed with the point of the inſtrument, produces pain, and frequently ulceration, where it is in contact: that the catheter is apt to be filled with glairy mucus, and, by remaining in the paſſage, is more ſubject to incruſt. Patients are alſo obliged to keep their bed, and are ſubject to be conſtantly wet by the dribbling of the urine, or to have a veſſel conſtantly with them, to prevent this inconvenience.

Mr. Deſault, on the whole, is of opinion, that the moſt eligible practice is to evacuate the urine entirely, and to throw injections into the bladder, to cleanſe that viſcus from any puriform or mucus depoſit; then either to ſtop up the catheter or withdraw it, and wait till a quantity is ſecreted ſufficient moderately to diſtend the muſcular coat of the bladder.

Theſe alternate actions of moderate extenſion and relaxation produce the ſame effect on this viſcus as on other parts of the body.

A catheter of the elaſtic gum ſhould be uſed, and worn for ſeveral days. In paſſing it, care ſhould be taken to puſh it no farther after the eyes of the inſtrument have paſſed the neck of the bladder. If the catheter is too long, part may be cut off: it ſhould then be ſecured on the corona glandis, or penis, as

deſcribed

deſcribed page 149. The urine ſhould be evacuated every two or three hours, according to the circumſtances of the quantity ſecreted, and the deſire of the patient to void his urine; but this inclination ſhould not always be waited for, for the bladder is ſometimes ſo ſlightly ſenſible, that it will admit of ſurpriſing diſtention without any diſpoſition to evacuate its contents. And it ſhould be recollected, that no circumſtance tends more to deſtroy the natural tone of its muſcular coat, than this forcible diſtention. The catheter ſhould be withdrawn every ſix or eight days, to clean it and prevent incruſtations; and as the form has been moulded at its curvature, in conſequence of reſting in the urethra, it can afterwards often be introduced without the probe. As the treatment of this diſeaſe is tedious, and as the bladder rarely recovers perfectly its tone, it is as well to inſtruct the patient in the manner of paſſing the inſtrument; and, when accuſtomed to do this, he need only uſe it when he has occaſion to void his urine. At the expiration of a little time, he ſhould attempt to make water without the inſtrument; if he ſucceeds, the catheter ſhould be paſſed to aſcertain whether the bladder is perfectly evacuated; if any urine ſhould ſtill remain, the uſe of the catheter ſhould be continued. If this precaution is not attended to, the retention will return as bad as before.

Tonic and ſlightly aſtringent injections have been propoſed to be thrown into the bladder; ſuch as decoction of bark, weak ſolutions of vitriolated iron, &c. Mr. Deſault obſerves, that he has made uſe of

theſe injections without deriving any important advantages. Warm diuretics, balſamics, cold baths, frictions with tincture of cantharides, &c. but, in old age, theſe remedies are frequently injurious, and rarely uſeful. In this diſeaſe, the only remedy Mr. Deſault recommends is the uſe of the catheter of the elaſtic gum; which, when well conducted, often reſtores the bladder to its natural tone; and, when this fails, other remedies are rarely attended with ſucceſs.

Obſervations on the good Effects of Bliſters, applied on the Head, in Commotions of the Brain.

[By Mr. GAVARD DE MONTMELLIAN, formerly Surgeon to the Hôtel Dieu.]

JOHN Fribourg, 22 years of age, on the 5th of December, 1784, at 5 o'clock in the morning, fell down ſtairs and ſtruck his forehead with conſiderable force againſt the banniſters: his companions, wakened by the noiſe, went immediately to his aſſiſtance: they found him ſenſeleſs, without motion, and bleeding profuſely from the ears, noſe, and mouth. They ſent for one of the ſtudents in ſurgery, who bled him in each arm; and, at noon, he was bled again copiouſly in the foot.

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The 6th, the patient being in the ſame ſituation, he was bled twice more; after which he vomited, at different times, many mouthfuls of clear water; ſome drops of a ſpirituous vulnerary water were introduced into the mouth, which he greedily ſwallowed. The actions of deglutition and vomiting, circulation and reſpiration, were the only motions that were apparent.

The 7th, no change.

The 8th, Mr. Gavard de Montmellian ſays he was brought to the Hôpital de la Charité, at Paris, where he was at that time a pupil, and thus deſcribes his ſituation.

At this time he was ſenſeleſs and without motion, bleeding profuſely from the mouth, noſe, and ears. He vomited from time to time a quantity of clear water. His pulſe was ſlow, concentrated, and moderately regular, reſpecting the intervals of pulſation, but ſome ſtrokes were ſtronger than others. His reſpiration was feeble and laborious. No wound or contuſion was diſcovered on the head. Mr. Deſault, at that time the next in ſucceſſion as ſurgeon-major, and who officiated as ſuch in the Hôpital de la Charité, ordered that the patient ſhould be placed in a warm bed, and that his head ſhould be ſhaved, and a bliſter applied over the head, ſprinkled with powder of cantharides, in the form of a cap, extending from the projections on the os frontis to the protuberances of the os occipitis.

The bliſter was applied at 11 in the forenoon; but, notwithſtanding the irritation produced by its ſtimulus,

there was no ſign of returning ſenſibility either this day or the following night: but the vomiting and effuſion of blood from the ears began to ceaſe, and the hemorrhage from the noſe and mouth was conſiderably leſs. The reſpiration became eaſy, and the pulſe more regular.

The 9th, at 7 in the morning, the patient was much in the ſame ſtate as in the evening; but, when the cuticle was raiſed, he recovered his recollection a little, and complained, not only of uneaſineſs, inſeparable from this circumſtance, but alſo of a deep-ſeated pain, which he referred to the frontal region. The wound was dreſſed with baſilicon, quickened with cantharides.

In the evening the patient recovered his recollection perfectly. His reſpiration was free, with leſs pain in his head, and ſcarce any hemorrhage from his noſe or mouth. He was tranquil during the night, and ſlept many hours. About three in the morning he experienced ſome ardor urinæ.

On the 10th, all the ſymptoms, referable to the commotion of the brain, had perfectly ſubſided; but the irritation of the urinary paſſages was ſo conſiderable, that the patient voided his urine drop by drop, and at the ſame time with exquiſite pain. Mr. Deſault dreſſed his head with baſilicon only, and preſcribed linſeed tea as a common drink, and three boluſſes to be taken in the courſe of the day, compoſed of camphire g. vi. powder of marſhmallow and liquorice root, of each ℈ j. mixed up with ſirup of violets.

Towards

Towards the evening, the ardor urinæ had conſiderably diminiſhed; and,

On the 11th, they ceaſed entirely; but the uſe of the boluſſes and linſeed tea was perſiſted in, and a proper diet obſerved.

For four days he took a little nouriſhment, and was obviouſly convaleſcent: the ſuppuration from the bliſter was at this time nearly dried up, when ſuddenly, on the 18th, without any alteration in the regimen, or any other apparent cauſe, he was threatened with a recurrence of the ſame ſymptoms he had experienced before. He complained of a ſenſe of weight in his head, and of weakneſs in all his limbs; the tongue was yellow, and the pulſe ſlow and ſmall.

Mr. Deſault had his head ſhaved, and a bliſter equally ſtrong, but not quite ſo extenſive, as the firſt applied. He was put on diet, ordered linſeed tea, and two camphire boluſſes a day, to prevent as much as poſſible the urinary organs being ſtimulated by the cantharides.

On the 19th, the diſcharge from this bliſter was extremely conſiderable; and, after elevating the cuticle, it was dreſſed with ſimple baſilicon. From this moment the patient felt no ſenſe of weight in his head, nor any weakneſs in his limbs.

On the four following days the ſuppuration was conſiderable.

On the 24th, as the tongue was a little furred, attended with a bitter taſte in the mouth, Mr. Deſault ordered an emetic, and the next day a medicine, to

give tone to the digeſtive organs. He could, at this time, take a little nouriſhment; and, as the bliſter was only kept open by the baſilicon, it gradually dried up; and, by the 31ſt, the ſuppuration had quite ceaſed. From this time he recovered his health and ſtrength rapidly; and, after ſome days of convaleſcence, he left the hoſpital perfectly cured on the 17th of January, 1785.

CASE II.

ON the morning of the 18th of April, 1785, a child, ten years of age, was thrown down ſenſeleſs, by a heavy plank falling on his head. After ſwallowing ſome volatile ſpirits, which were alſo applied to the noſe without any effect, he was brought to the Hôtel Dieu, on the ſame day, at 5 in the afternoon. At this time he was ſenſeleſs, without any apparent motion, but circulation, reſpiration, and deglutition. There was no hemorrhage from the ears, mouth, or noſtrils, or any vomiting, as in the preceding caſe. The face was fluſhed, the reſpiration ſhort and laborious, and the pulſe ſmall and ſlow, conſidering the age of the patient. There was a contuſion on the middle part of the ſaggital ſuture, where he had received the blow.

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He was bled twice in the courſe of the evening, which produced no other effect than rendering the pulſe more regular.

On the ſecond day, Mr. Deſault applied a large and active bliſter on the head. The reſt of the day and the following night he was much the ſame.

On the 3d, on elevating the cuticle, he ſeemed to feel ſome pain, and ſpoke a little coherently. The dreſſings were the bliſter-ointment, quickened with cantharides: the irritation of the urinary organs were guarded againſt by the exhibition of the linſeed tea. Two hours after the dreſſing, his reſpiration was more free, the pulſe quick and fuller than in the evening, and his recollection gradually recovered. The drowſineſs ſtill continued, and he complained of a conſiderable ſenſe of heavineſs in the head.

On the 4th, the ſuppuration was abundant; and, in conſequence of the ſtimulus of the bliſtering ointment, the patient experienced ſome pain for three hours after the dreſſing. From this time all the ſymptoms, conſequent to the commotion of the brain, ceaſed, nor did they ever recur.

The ſame dreſſing was continued for ſome time, to keep up the ſuppuration. The uſe of the linſeed tea perſiſted in, to which may be attributed the circumſtance of the urinary organs not being affected.

On the 8th, he was indulged with a little ſolid food.

On the 14th, he was purged; and, from this day, the bliſter was ſuffered gradually to heal. The ſtrength of the patient increaſed with his appetite;

and, on the 14th day of May, he was diſcharged, cured, from the Hôtel Dieu. The ſame practice, attended with the ſame ſucceſs, is ſeen frequently in this hoſpital.

Bliſters on the head, aſſiſted by bleeding, are the moſt efficacious means we can employ to remove the firſt effects occaſioned by commotion of the brain. There is a conſecutive ſymptom, not leſs alarming in its conſequence, which may be obviated by the ſame remedy; this ſymptom is a gradual inflammation and ſuppuration of the brain, or its membranes, which is conſequent to the irritation produced by the external injury; nor does it frequently appear till ſome time after the accident, as will be ſeen in the following obſervation.

CASE III.

A MAN, 35 years of age, received a blow on the head, which ſtunned him for ſome minutes, without knocking him down. He got himſelf bled in the foot, drank an infuſion of vulnerary plants, and in a month conceived himſelf cured; at the end of this time he loſt his appetite, his tongue became yellow and furred, and he was attacked with ſhiverings and coma, and died on the 16th day.

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The appearances on diſſection were as follow: No appearance of contuſion on the external ſurface of the head; the integuments perfectly ſound; and the colour of the external table of the cranium natural; but the internal table was black throughout the whole extent of the right parietal foſſa: this blackneſs was alſo obſerved throughout the correſpondent portion of the dura-mater, and even a little beyond it. In other reſpects, this membrane adhered to the cranium in the ſame manner as the oppoſite ſide; under the dura-mater, at the part above-mentioned, a ſlight depoſit of thick and greyiſh matter was diſcovered; which had extended under the different windings of the cranium, and had affected the pia-mater, and the correſpondent portion of the brain, to ſome lines in depth. The reſt of this viſcus was in its natural ſituation. In the cavities of the thorax and abdomen, no circumſtance worth mentioning was diſcovered.

If, after the moſt minute attention to the injuries of this deſcription, the ſurgeon ſhould entertain doubts of commotion of the brain, or effuſion, ſhould he not decide, particularly in hoſpitals (where the operation of the trepan rarely ſucceeds), in favour of the application of bliſters, which will be ſufficient if commotion only exiſts? And, it ſhould be remembered, that the application of the veſicatories does not prohibit the uſe of other remedies; which may be had recourſe to, as circumſtances or ſymptoms indicate the neceſſity.

In many caſes that require the application of the trepan, would not the application of bliſters be proper? For

For example, in a caſe of ſanguineous effuſion, with a fracture, accompanied with ſplinters, which could be elevated by ordinary means, &c. In fact, it is almoſt impoſſible, that the means which produced this fracture of the cranium, particularly the laceration of the veſſels, the immediate cauſe of the effuſion, ſhould not at the ſame time produce commotion of the brain. And, in theſe caſes, after the fractured ſplinters are raiſed, and an iſſue is given to the extravaſated blood, the commotion ſtill remains, and, for the moſt part, produces a fatal termination; and which, as I before obſerved, may be frequently avoided by the application of bliſters.

Cure of a Caſe of a preternatural Anus, with Remarks.

[By Mr. Desault.]

FRANCIS Vialtet, of Moulins, a ſailor, on-board the Saint Michael ſhip of war, was wounded, by the burſting of a bomb, in the month of May, 1786: he fainted away, nor recovered his recollection till three hours after the engagement. The wound extended from two inches above the abdominal ring, on the right ſide, to the bottom of the ſcrotum, where the teſticle was expoſed. There appeared at the ſuperior part of the wound an inch of divided inteſtine,

inteſtine, that retracted into the abdomen at the time the wound was dreſſed, and was in ſuch a manner as to leave a hole for the evacuation of the fœces.

A month after the accident he was left at the Marine Hoſpital, at Breſt; where he remained till he was cured, or at leaſt ſufficiently ſo for the food to eſcape in a ſtate of imperfect digeſtion, by a portion of the inteſtine, which remained expoſed on the ſurface of the abdomen.

This unfortunate man afterwards travelled on foot to his own home; where, finding his friends incapable of aſſiſting him, he travelled through the different parts of Europe, ſeeking in vain, from the hoſpitals, an alleviation of his miſery.

Four years being ſpent in theſe fruitleſs reſearches, he applied to the Hôtel Dieu on the 29th of September, 1790. The divided portion of the protruded inteſtine had grown to a conſiderable ſize; its ſhape was nearly conical and about nine inches high, the middle part of which projected conſiderably forwards; its baſe, ſlightly conſtricted, came from under a doubling of the ſkin a little above the abdominal ring; its ſuperior part turned backwards, and, deſcending to the middle of his thighs, ended in a narrow orifice, which gave iſſue to the fœcal diſcharge. From the time he was wounded, nothing like fœces was diſcharged by the anus; nevertheleſs he went to ſtool every three or four months, and diſcharged a ſmall quantity of whitiſh matter, which was nothing more than the mucus ſecreted by the rectum. The

ſurface

ſurface of the tumour was red and full of rugæ; and, at its inferior part, reſembled the valvulæ conniventes of the inteſtines.

At the ſame abdominal opening, on the external ſurface of this maſs, a ſmall tumour was ſeen ſimilar to the firſt in conſiſtence and colour. This laſt was oval in its ſhape, and ſo conſtricted at its orifice, that a ſmall quantity of ſeroſity only could eſcape. Theſe tumours poſſeſſed the ſame periſtaltic motions as the inteſtines, and were ſuſceptible of contraction when a few drops of water were dropped on their ſurface.

This unfortunate young man, who was tall and well formed, though extremely thin, was obliged to be conſtantly in a curved poſition, and to ſupport himſelf with crutches. An earthern pot, faſtened to his waiſt, and ſupported by a cord, was left hanging between his thighs, which received the extremity of the inteſtine; and the matter that was diſcharged from it, in a little time, was intolerably fœtid. Mr. Deſault was ſatisfied, that the principal tumour was formed by that portion of the inteſtine that correſponded to the ſtomach; and that it was invaginated, like the finger of a glove, in ſuch a manner as to preſent externally only its internal ſurface. He was alſo convinced, that the ſmall tumour was only the inferior part of the inteſtine invaginated in the ſame manner, and that the edges of the divided portion adhered to the opening of the parities of the abdomen, and was united and blended with them by one common cicatrix. Theſe membranes were ſo conſiderably thickened by friction,

friction, expoſure to the air, and by the paſſage of the fœces, that an attempt to reduce ſuch a maſs was apparently raſh, if Mr. Default had not been taught by experience what were the effects of compreſſion in ſimilar caſes. To be convinced of the probable efficacy of compreſſion in this caſe, Mr. Default preſſed it for ſome minutes between his hands, and its diminution of bulk afforded him ſome idea what might be expected from a conſtant and uniform compreſſion, kept up for a conſiderable time.

With this intention, Mr. Default applied a ſimple bandage, from below upwards, covering the whole extent of the tumour, leaving only an opening at the apex, for the paſſage of the fœces. The effect of this plan was ſoon perceptible; for, in the evening of the ſame day, the bandage became ſo looſe, in conſequence of the diminiſhed ſize of the tumour, that its re-application become abſolutely neceſſary. The ſame meaſures were purſued on the following days; and, on the fourth, the inteſtine had regained its natural ſize. Mr. Default conceiving the reduction now poſſible, had the tumour raiſed perpendicular to the opening in the abdomen: he then introduced one finger in the orifice, whilſt, with the other hand, by uſing gentle preſſure, he prevented the retraction of the inteſtine; and, at the ſame time, he altered the vaginal ſituation of the gut, and returned it into the abdomen. The ſame plan was followed with the ſmall tumour, nor was any difficulty experienced in the reduction: but, though this caſe was thus far ſucceſsfully treated, one dreadful inconvenience yet remained, which was the conſtant diſ-

charge

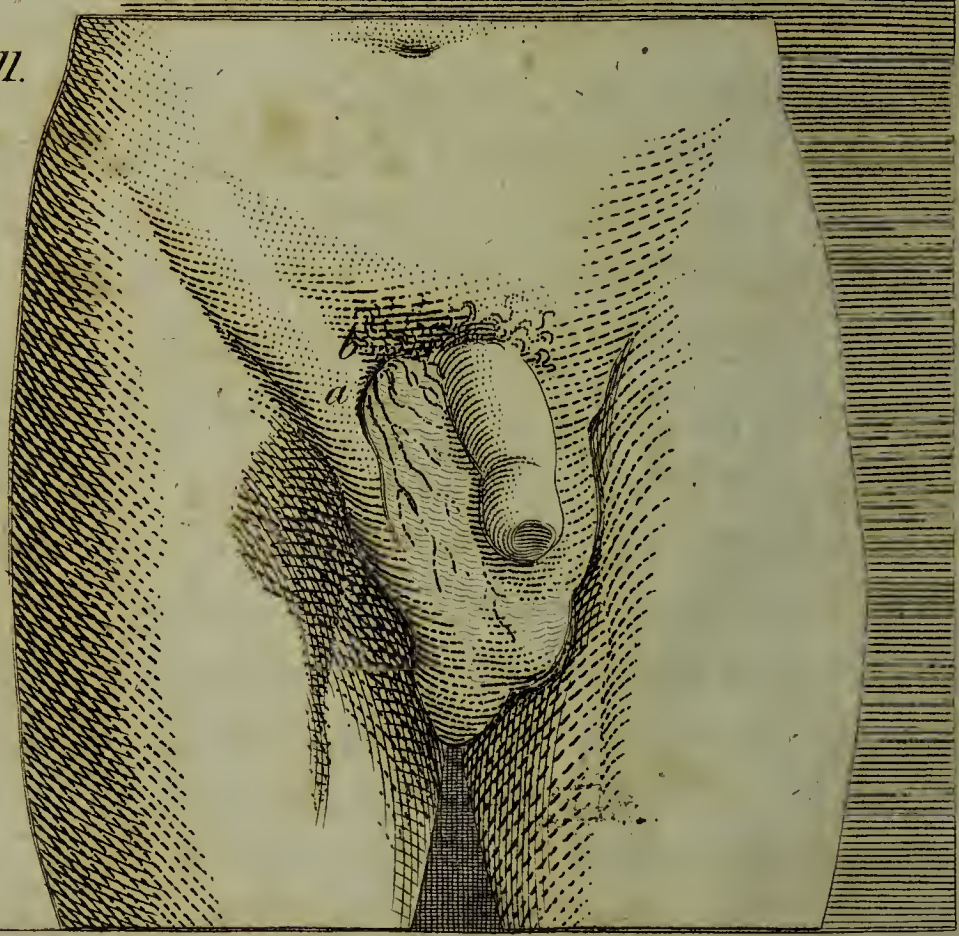
charge of fœces through the wound. Mr. Deſault introduced into the inteſtine a tent of old linen, three inches in length, preſerved in its ſituation by a proper bandage. This was intended to be withdrawn twice a day, to favour the evacuation of the fœces; but, after ſome ſymptoms of the flatus in the inteſtine, accompanied with conſiderable heat, he paſſed wind by the anus. Theſe were ſucceeded by colicky ſenſations, attended with pricking pains in the rectum, which produced a frequent inclination to go to ſtool, and that not without effect; for, he voided half a pound of fluid fœces, ſimilar to thoſe voided after indigeſtion. He had eight ſtools more the following night, all preceded by ſlight colicky ſenſations and acute pain about the rectum, which had not been accuſtomed to the preſence of fœces.

The next day the patient was a little exhauſted, in conſequence of the evacuation; and, for three days afterwards, the ſtools were very frequent, but accompanied with leſs pain. The fœces now gradually acquired a firmer conſiſtence, and the number of ſtools proportionably diminiſhed. The uſe of the linen tent, in the inteſtine, was ſuppreſſed on the 8th day, and the external orifice covered with a doſſil of lint, and, over the whole, Mr. Deſault applied the ball or pad of a large and flat elaſtic bandage. This plan was adequate to the intention of preventing the eſcape of the fœces, which now paſſed entirely by the rectum.

He gradually recovered his ſtrength and health, and, during two months that he remained in the Hôtel Dieu, his fœces were ſimilar to thoſe of a man in health,

Fig. I.

Fig. II.



health, nor the leaſt inconvenience experienced in their evacuation. He was repeatedly examined by different ſurgeons, who had attended to the caſe ever ſince his admiſſion; who diſcovered only a ſlight ſerous diſcharge, which was imbibed by a ſmall portion of lint, placed on the fiſtulous opening of the abdomen.

Three months after his diſmiſſion from the Hôtel Dieu he was examined by the ſurgeon of the hoſpital at Moulins, who found him in an excellent ſtate of health, though his conduct had been rather intemperate.

EXPLANATION OF PLATE III.

FIG. I. a b c d e. The principal tumour, formed by the portion of the inteſtine correſponding to the ſtomach, invaginated like the finger of a glove.

a e. The neck ſupporting the broadeſt part of the tumour, and iſſuing from under a fold of the ſkin.

b. Rugæ formed by the internal membrane of the inteſtine, which was turned outwards.

c. The apex of the tumour, having a ſmall opening poſteriorly for the evacuation of the fœces.

e f. The penis puſhed to the left ſide by the tumour.

g. The

g. The ſmall tumour, formed by the part correſponding to the anus, invaginated like the other.

FIG. II. Repreſents the ſtate of the parts after the cure.

a. b. A fold of the ſkin, forming a ſort of valve before the opening of the abdomen, which remained fiſtulous.

There was a caſe of the ſame kind at the Hôtel Dieu, under the care of Mr. Deſault, of a man with a preternatural anus, conſequent to a ſcrotal hernia, that had terminated in gangrene; a portion of the inteſtine, that correſponded to the ſtomach, was invaginated like the other, and projected three inches outwards: he was lean and weak, although he devoured a prodigious quantity of food, but it was voided in a ſtate imperfectly digeſted; and to this circumſtance our author attributes his preferring food difficult of digeſtion, particularly ſallad. His ſituation rendered him extremely apprehenſive; but, emboldened, in ſome meaſure, by the event of the ſailor's caſe, he put himſelf under the care of Mr. Deſault. The cure of this laſt caſe was materially different from that of the ſailor's, as a part of the inteſtine, (contiguous to the portion that appeared externally,) which had formerly fallen down into the ſcrotum, adhered to the ſurrounding

ſurrounding parts, a circumſtance extremely unfavourable, as no preſſure could be made on the opening of the inteſtine without compreſſing the adhering portion of the gut. The invaginated portion was however reduced, and the opening cloſed by a linen tent ſupported by a truſs. Eighteen hours after this, he was attacked with ſlight colicky pains; which alarmed him ſo much, that he took off the dreſſings, and abandoned all hopes of a cure.

This attempt, ſlight however as it was, produced a very ſenſible effect. This man, who before voided every four months only the whitiſh mucus of the inteſtines, had been obliged that day to go twice to ſtool, and voided as much of this kind of mucus as was uſual when the intervals were longer. Theſe diſcharges continued for 8 following days; and, at laſt, intervals of one, two, three, and four, days intervened; and, at the time this was writing, a month had paſſed without any evacuation of this mucus. From this caſe no important inference can certainly be drawn, but ſtill the relation of facts of this ſingular deſcription, and ſo little known, may be attended with advantage.

The hiſtory of the preternatural anus opens a new field for chirurgical obſervation. This diſeaſe occurs ſufficiently frequent, to afford opportunities to acquire information on the ſubject. From a ſingle fact general rules cannot certainly be adduced; but, from the caſes

juſt related, ſome hopes may be entertained of a cure, when the circumſtances are ſimilar.

From the writings of the ancients on this diſeaſe, little information can be acquired; but, in modern works, many caſes are to be met with; but unfortunately they only mention the occaſional cauſes, omitting the deſcription of the external appearances, and the particular ſtate of the inteſtines. One of the moſt frequent occurrences in this complaint, the protruſion of the inteſtine from the belly, ſeems to have eſcaped the notice of all authors, from Hippocrates* (who has deſcribed it) to Fabricius Hildanus,† who, in the beginning of the laſt century, related it as a thing unknown and extraordinary. Since the time of Fabricius, caſes of tumors formed externally by the inteſtine have been mentioned by writers; yet the appearance of the parts have not till lately been accurately deſcribed. Mr. Robin found the cœcum and a part of the colon invaginated in the rectum, in conſequence of a blow or fall received on that inteſtine, which terminated fatally.

This caſe, related by Mr. Hevin, in the 4th vol. of the Mémoires de l'Académie de Chirurgie,‡ and a ſimilar one by Mr. Le Blanc, threw ſome light on the ſubject. But Mr. Le Cat had an occaſion to diſſect the body of a woman, who had a preternatural anus, and the opportunity of demonſtrating the invagination

* Epidem. lib. vii.

† Centur. 1. Obſ. 74.

‡ Edit. in 4to.

of

of the inteſtine, which had protruded externally.* Among the unpleaſant effects neceſſarily attendant on this diſeaſe, are the extreme uncleanlineſs occaſioned by the conſtant diſcharge of fœces through the opening, the excoriation of the ſurrounding parts, the return of griping pains, obſtructions to the paſſage of the fœces from the narrowneſs of the aperture, weakneſs conſequent to imperfect digeſtion, and ſometimes to ſuch a degree as to prove fatal; as in the caſes related by Meſſrs. Hoin and Le Blanc,† and which has lately occurred in the Hôtel Dieu at the beginning of this year.

Theſe inconveniences have induced ſurgeons to ſuggeſt different modes of relief; that, indeed, have been partially procured. Boxes have been invented, made of ſilver or tin, and applied to the opening in the abdomen; and retained in this ſituation by a proper bandage. This contrivance, by containing and collecting the fœces, leſſened their fœtor, and, according to the account of Mr. Moſcati, they were conducted into theſe veſſels by means of a leaden pipe, left in the cavity of the abdomen.‡ Mr. Sabatier has propoſed to keep the inteſtine ſufficiently open, to afford an eaſy paſſage to the excrements, by the introduction of a middling-ſized tent.‖

Mr. Richter, on the contrary, wiſhes the fœces to be retained till digeſtion is more perfect. To anſwer

* Tranſact. Philoſoph. N° 460. p. 716.

† Eſſai ſur les Hernies.

‡ Académie de Chir. tom. v. p. 596.

‖ Ibid. p. 594.

this indication, he checks their diſcharge, by means of a ſponge applied to the external opening, and retained by an elaſtic bandage.* This method, though apparently ingenious, is rejected by Mr. Lœffler, who has ſeen it followed with colic, conſtipation of the bowels, excoriation, and inflammation of the ſkin. Some few ſurgeons, not ſatisfied with theſe palliative methods, have been induced to attempt the radical cure, which nature herſelf ſeems to point out.

Numerous caſes have occurred, where the fœces have reſumed their natural courſe, after having been evacuated even for months, from a wound in the abdomen, ſubſequent to an operation for a hernia. Mr. Petit mentions a caſe, where the two ends of the inteſtine hung out of the abdominal ring, granulated after the ſeparation of the gangrenous parts, and were confounded with the ſurface of the wound by one common cicatrix; and the fœces afterwards reſumed their natural courſe.†

Mr. Acrell mentions a ſimilar caſe, where he ſeparated, with his ſciſſors, a portion of gangrenous inteſtine.‡

A number of ſimilar inſtances are to be found in different writers, as in Le Dran,‖ Pott,§ Richard,¶

* Traité des Hernies, traduit par Rougemont, chap. xxviii.

† Malad. Chir. tom. ii. p. 407.

‡ Obſervation, p. 174.

‖ Obſerv. de Chir.

§ Treatiſe on Hernia.

¶ Obſerv. de Med.

Journal

Journal de Médecine,* the Memoirs of a Society of Harlem,† Eſſays by a Society of Surgeons at Copenhagen.‡

Encouraged thus by the reſources of nature, ſurgeons ſhould certainly avail themſelves of the efforts of art, and their want of ſucceſs, hitherto, has certainly aroſe from improper methods being adopted, in conſequence of being ignorant of the nature of the diſeaſe. Some, not regarding the invagination of the inteſtine, have propoſed to unite externally the divided portions of the gut, according to Ramdhor's method, and to reduce them when ſufficiently healed.‖ Others have recommended the obſervance of a ſtrict regimen, as a means likely to procure a reunion, by diminiſhing the diſcharge of fœces; but, fortunately for the patients, theſe two ſpeculative opinions have never been reduced to practice.

In a letter from Mr. Bruns to Mr. Henkel there is a caſe related of a preternatural anus, the edges of which, after having been previouſly excoriated by the application of the lapis infernalis, were retained together by future; the edges united, but the wound broke open again in a few days.

Mr. Le Cat§ attempted the cure of a woman who had a preternatural anus, by excoriating the edges of the wound, and bringing them together by means of future; after having previouſly dilated, by means of

* Obſ. de Duboucix, tom. xxxii. Dufreſnoy, tom. xxxvii. De Laborde, ibid.

† Obſ. de Funn, tom. i.

‡ Obſ. de Enfield.

‖ Richter, chap. xxviii. p. 162.

§ Tranſact. Phil.

a canula, that portion of the inteſtine that correſponded with the anus; but the protruded portion had acquired ſuch a conſiderable bulk, that it was abſolutely irreducible. Theſe unſucceſsful caſes deterred ſurgeons from making new attempts; and it became, at laſt, the general opinion, that the cure of theſe caſes was impoſſible, or, at leaſt, attended with imminent danger.

In the opinion of many practitioners, the reduction of the inteſtine is even attended with danger, and all have conceived it impoſſible when of long ſtanding and of a conſiderable ſize: many authors alſo mention, that the part of the inteſtine, contiguous to the rectum, becomes cloſed, and its cavity obliterated. Mr. Richter himſelf is not free from this prejudice; but certainly the circumſtance of the invagination of the inteſtine muſt have eſcaped his recollection, as it is a decided proof of the exiſtence of a cavity. This obliteration has yet never been proved, and all thoſe who have attended to this ſubject are of opinion that it cannot poſſibly take place. Monſ. Le Cat, on diſſecting a ſubject where the fœces had not paſſed through the rectum for twelve years, diſcovered no obliteration.

The patient, who died in the Hôtel Dieu laſt January, had the whole inferior part of the inteſtinal tube entire, though a little contracted. In this caſe, nothing had paſſed for two years through the rectum; and a conſiderable portion of the ilium had been deſtroyed by gangrene; beſides, in all the patients of this deſcription, the mucus of the inteſtine has been evacu-

ated

ated from time to time; a fact which clearly proves no obliteration could poſſibly exiſt.

Some authors, from not attending to the ſtate of the inteſtine, are of opinion that the inteſtine paſſes out of the belly in its ordinary ſtate, and that it is not its extremity that adheres to the ſkin: and, for this reaſon, they are apprehenſive that the fœces and mucus will be diffuſed in the cavity of the abdomen.*

The thickneſs of the membranes of the inteſtines is a more ſerious objection: it has always been viewed as an invincible obſtacle to the reduction, but the caſe we have related proves the poſſibility of returning the gut: and, from analogy, we are juſtified in ſuppoſing it may be effected; for, in caſes of prolapſus ani of long ſtanding, that apparently, from their bulk, were irreducible, gradual and methodical preſſure has been attended with ſucceſs.

Practitioners, from the number of theſe adheſions, ought not to be deterred from attempting the reduction; for, ſuppoſing that they exiſt, and that they are more dangerous than thoſe produced by inflammations of the abdomen, yet ſtill no advantage can ariſe from leaving the invaginated portion of the inteſtine out of the abdomen. Beſides, ſuch a practice may be attended with the moſt fatal conſequences. Mr. Puy has ſeen two caſes that terminated fatally, from the iſſue of the fœces being ſtopped.† Mr. Lange has ſeen the gut ſo diſtended

* Richter, chap. xxix. p. 168.

† Académie de Chirurgie.

with blood, that it was neceſſary to remove the ſtrangulation by an inciſion into the abdomen.*

Meſſrs Hoin and Le Blanc mention inſtances of gangrene, produced by ſtrangulation;† and an invalid, whoſe caſe is mentioned by Mr. Sabatier, was near loſing his life from a ſimilar cauſe.

From the caſes and obſervations above-mentioned, Mr. Deſault is decidedly of opinion, that ſound and good practice indicates the propriety of returning the inteſtine in the abdomen; and that this operation is always poſſible, however large the tumour, and however long it may have exiſted. When this is effected, the attention ſhould be directed to ſuggeſt ſome contrivance to retain and prevent the inteſtine from again protruding.‡ The ivory peſſary, which has been invented, is not found adequate to the intention, as the inteſtine can eſcape through the aperture of the inſtrument, and become a new means of ſtrangulation; beſides, the preſſure of ſo hard a ſubſtance will neceſſarily bruiſe the ſurrounding parts; and, if applied with a ſufficient degree of force to anſwer the purpoſe indicated, the preſſure would be inſupportable. The ſoft cuſhion, recommended by Mr. Sabatier, and the ſponge of Richter, are not liable to the ſame objection; but ſtill they are ſubject to the inconvenience remarked by Lœffler, of imbibing the

* Smucker vermiſchte chirurgiſche ſchriſter, tom. 2.

† Operat. de Le Blanc, tom. ii. p. 445.

‡ Mein ſur les Anus contre Nature. Acad. de Chirurgie, tom. v.

diſcharge

diſcharge of the thin and acrid matter, which is apt to produce excoriation of the adjacent parts.

Mr. Deſault ſuggeſts the contrivance of a tent made of linen, with the addition of a layer of lint and other compreſſes, kept on the part by means of a bandage, moderately tight, which will effectually prevent the protruſion of the inteſtine, and at the ſame time keep up a ſufficient degree of dilatation; and, by retaining the fœces in the intervals of dreſſing, occaſion them to remain longer in the inteſtinal tube, and more nouriſhment to be afforded the patient; if a ſmall quantity of the fluid ſhould eſcape, it will be abſorbed by the lint, and produce no irritation on the ſkin. The ſlight colicky ſenſations, which are conſequent to the firſt application, will ceaſe in a few days, as ſoon as the inteſtine is accuſtomed to its preſence. This was the firſt advantage Mr. Deſault derived from this method, nor did his views extend farther: but, from the unexpected ſucceſs of the ſailor's caſe, he has hopes, at leaſt, ſometimes to cure a diſeaſe, hitherto ſuppoſed irremediable. This cure has alſo proved the advantage of adopting ſimple methods, and varying them according to circumſtances.

In the preternatural anus, whether it be the conſequence of a penetrating wound of the abdomen, or conſequent to hernia with gangrene, there can only be two ſtates of the inteſtine eſſentially different from each other; one of theſe, and which indeed moſt generally occurs, is when a part of the circumference of the gut is divided; and the other, when the diviſion has been complete.

In

In both caſes, from the proceſs of inflammation, the edges of the divided portion of this canal unite with the edges of the integuments and ſurrounding parts; (this circumſtance uniformly takes place, nor has it been diſproved by a ſingle fact;) and, from this time, the parieties of the abdomen, if they are entire, will form a ſupplement to the portion of the canal, which has been deſtroyed, and the fœces will be voided by the anus, unleſs the portions of the inteſtine, by their mode of adheſion, ſhould form an angle ſufficiently acute to ſtop them in their progreſs.

The wound in the abdomen, from its affording an eaſier and ſhorter iſſue to the fœces than if they had to paſs through the whole circumvolutions of the inteſtines, and the diſeaſed ſtate of that canal, are the efficient cauſes of the preternatural anus, that is to ſay, of the fœcal diſcharge from the abdomen. But there is another ſecondary cauſe, not leſs powerful in its effect: this is the contraction which takes place in that part of the inteſtine correſponding to the rectum. But are theſe cauſes ſufficiently powerful to preclude the aſſiſtance of art? The firſt, that is to ſay, the opening of the abdomen, is certainly not an invincible obſtacle, becauſe in hernia, attended with gangrene, the fœces often take their natural courſe after paſſing through the abdominal opening, and Mr. Deſault is of opinion that this accident of a preternatural anus does not occur ſo frequently after theſe caſes as formerly, which certainly may be attributed to the preſent methodical and attentive manner of dreſſing wounds of this deſcription. A tent, anſwering the intention of a plug,

might

might ſupply the defect of continuity in the parietes of the abdomen. But this is not all; the portions of the inteſtine often form an angle at the part where the ſeparation has taken place.

This angle affords more or leſs reſiſtance to the paſſage of the fœces, (agreeable to the remark of Mr. Morand,) according as it is more or leſs acute, and there is no method of removing this obſtacle, but by enlarging the angle, formed by the ſegments of the inteſtine, by ſeparating them from each other. Mr. Deſault is of opinion that long tents made of linen, introduced and fixed into the two ends of the inteſtine, will anſwer the indication, by bringing together gradually the divided portions of inteſtine in a ſtrait line. By this plan, he thinks the upper end of the portion of inteſtine, correſponding with the rectum, will be dilated, and thus the fœces will gradually take their natural courſe.*

The methods here recommended may perhaps be the means of reſtoring to ſociety a number of thoſe affected with the above-mentioned complaint, even ſuppoſing that a cure cannot ever be effected, which the caſe of the ſailor abſolutely contradicts. No inconvenience can ariſe from the attempt; and patients, who have ſubmitted to this treatment, have been able to retain at will the alimentary matter, and of courſe were in no danger of dying of inanition, and, at the ſame time, have been exempt from the ſerious and ſometimes fatal conſequence of ſtrangulation.

* Acad. de Chir. et Acad. de Sciences, p. 249.

The Sailor, whoſe Caſe has been related, returned to the Hôtel Dieu in a Situation extremely unexpected.

FOR the ſpace of five months after his diſmiſſion from the hoſpital, he was in every particular perfectly well, nor had he experienced the ſlighteſt inconvenience. His ſtools ſtill continued their natural courſe. Preſuming he had nothing to apprehend, he accuſtomed himſelf to violent exerciſe and exertions of perſonal ſtrength, to prove his vigour to his fellow-countrymen, who had ſeen him in his former deplorable ſituation a few months ſince. — This conduct was attended with very ſerious conſequences. In attempting to lift a caſk of wine for a wager, his bandage broke: as it was attended with no pain, it did not at the time excite his attention, nor prevent him from winning his wager. He walked for two hours afterwards with a handkerchief round his waiſt. The inteſtine was engaged in the abdominal aperture, (which was ſtill open,) and protruded about ſix inches in the ſpace of an hour, that tranſpired, before he arrived home. After he had attempted the reduction himſelf, he called in the aſſiſtance of the ſurgeons in the neighbourhood, whoſe endeavours were equally unſucceſsful. This was on the 4th of March.

In this ſituation he returned to Paris. Unable to bear the motion of a cart, he was obliged to walk, and to have a veſſel between the thighs to receive the fœces. The ſwelling and pain he experienced compelled

pelled him to apply for aſſiſtance at the different hoſpitals in his way to Paris, where he arrived, and was admitted into the Hôtel Dieu on the 31ſt of March. The next day, as his pulſe was full and plethoric, he was ordered to be bled. The tumour was equally hard, though leſs in ſize, as when he firſt applied for aſſiſtance, ſix months before this period. Compreſſion, in the ſame manner as before, was continued for ſix days. It is poſſible that the reduction might have been effected ſooner, but Mr. Deſault wiſhed, previous to its attempt, that the parts ſhould regain their natural ſtate. It was reduced with the greateſt eaſe, and its re-protruſion prevented by proper compreſſes, aſſiſted by the application of an elaſtic bandage. Symptoms of nauſea and vomiting came on ſubſequent to the replacement of the inteſtine, but ceaſed in about two hours, after ſome ſlight colicky ſenſations that preceded a copious and very looſe ſtool. The next night and following day he was attacked with diarrhœa, which continued till the ſecond day, when the fœces became tolerably conſiſtent; and, on the 9th of April, no fœces paſſed by the abdominal aperture, and he was, in every particular, as well as before his relapſe.

Mr. Deſault mentions two caſes that were at that time in the Hôtel Dieu, different in their nature, yet both of them complicated; one, at the time of writing this memoir, voided his fœces by the anus: the diſcharge from the abdominal aperture was trifling, and every circumſtance announced a ſpeedy and ſucceſsful termination.

Caſe

Caſe of a Luxation of the Foot outwards, and of the Aſtragalus upward and forward.

[By Mr. PLAIGNAND, Surgeon to the Hôtel Dieu.]

PETER Phifre, a gardener, on the 28th of Feb. 1788, fell from the top of a tree, about 24 feet in height. The whole weight of his body preſſed on his left foot, under which was a round middling-ſized ſtone. He felt ſomething tear in his foot, which was accompanied with exquiſite pain: his ſufferings were aggravated by attempting to riſe, and he was under the neceſſity of waiting till he had aſſiſtance to remove him to bed. The ſurgeon that was ſent for, conſidering it as a very ſerious accident, adviſed him to apply to the Hôtel Dieu, where he was admitted twelve hours after the accident. The back of the foot was directed outwards, and its external ſide downwards. The inferior part of the os calcis anſwered to the inferior extremity of the tibia; the aſtragalus was felt under the integuments, before the tibia, above the os cuboides and the laſt cuniform bone, and admitted of being eaſily moved. The heel was turned outwards, and the tendo Achilles ſituated behind the fibula. The pain that the patient endured was exquiſite.

Mr. Deſault, emboldened by the ſucceſs he had met with in ſimilar caſes, did not heſitate to attempt the

the reduction. The patient was laid upon his back, whilſt an aſſiſtant held the ſuperior part of the leg, with the intention of maintaining a counter-extenſion: whilſt another kept up an extenſion, by embracing with his right hand the back of the foot, and with his left the poſterior part of the heel; and, by this conduct, the foot was brought back to its natural ſituation without much difficulty. The aſtragalus reſted on the back of the foot. To reduce it, the extenſion was augmented, till there was a ſufficient ſpace between the tibia and os calcis to admit of the aſtragalus. Then the ſurgeon embraced the foot with the palms of his hands, whilſt he puſhed in the aſtragalus by the aſſiſtance of his thumbs. The reduction took place without noiſe, and it was known to have taken place, by the ſhape of the foot, its admitting of motion, and by the ſubſidence of pain.

Compreſſes of aq. vegito were applied, the leg and foot placed as a fracture: from the ſtate of the pulſe, it was thought proper to bleed him. The pains towards evening were a little aggravated, but gave way to fomentations of the aq. veg. renewed every two hours.

On the next day, there was a little ecchymoſis at the ankles, and the ſwelling of the foot a little increaſed ſince the evening before. The pulſe yet indicated the propriety of two more bleedings, which was done on the third and fourth day. On the 5th, the patient ſuffered little; and, as the ſwelling was diminiſhed, the frequency of fomentation was diſcontinued; but, the pains returning, they were again had recourſe

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to. The eaſe they produced was worthy of remark: by the eighth day, the ecchymoſis of the foot was diſſipated and the pain ſupportable.

On the 15th, the dreſſings were left off, and the foot admitted of a ſlight degree of motion in different directions, which, in the courſe of the day, was frequently repeated, to prevent the rigidity that might be conſequent to inflammation and reſt.

On the 18th, the patient got out of bed: and began to reſt on his foot, on the 26th, with the aſſiſtance of a ſtick. He walked tolerably well; and, eight days afterwards, this ſupport was unneceſſary. On the 39th, he was diſcharged from the hoſpital, perfectly able to walk without limping or difficulty.

The hiſtory of this caſe may throw conſiderable light on the treatment of luxations of the foot; and ſome others, of a very intereſting deſcription, will ſoon be publiſhed.

Caſe

Caſe of a ſpurious Aneuriſm of the brachial Artery cured by an Operation.

ON the 1ſt of January, 1791, at midnight, Mr. Deſault was called in by a ſurgeon, who, two hours before, in opening the baſilicic vein, had the misfortune to wound the brachial artery. From the account of all who were preſent at the operation, the blood came out by jerks, with much force, and was thrown to a conſiderable diſtance. They obſerved it was of a vermilion colour, that a great quantity was diſcharged in a little time, and that much difficulty was experienced in ſtopping it. Below the bending of the elbow, a tumour was obſerved of conſiderable extent, deep, and ſoft: the integuments were of their natural colour. This tumour pulſated at the ſame time with the artery, and theſe pulſations ſeemed to extend from the centre of the tumour to all points of its circumference.

Convinced, from theſe circumſtances, of the exiſtence of a primitive ſpurious aneuriſm, Mr. Deſault conceived, that, as compreſſion had been uſed in ſome caſes with ſucceſs, in this inſtance it might be employed to advantage. In conſequence, he applied, over the part that had been pricked, graduated thick compreſſes, that the preſſure might be conſiderable, which he retained on the part by a bandage three ells in length and three fingers in breadth: he paſſed it in the ſame way as in bleeding, except with a greater de-

gree of tightneſs, and paſſed more of it above and below the bending of the elbow. During three days that this bandage was worn, the patient was able to ſleep; but, in conſequence of the conſiderable ſwelling of the fore-arm, from the tightneſs of the bandage, it was removed, and another more looſely applied; which was paſſed on the fore-arm as far as the hand.

The ſwelling and tenſion ſoon diminiſhed, but, on the eighth day, he experienced conſiderable pain, which produced the ſame ſymptoms as before. Mr. Deſault, deſirous of avoiding a ſerious operation, reſolved to attempt a mode of compreſſion exempt from the inconvenience uſually attendant on the ordinary method. To anſwer this intention, he uſed a hollow tin machine, lining the cavity with ſoft cuſhions: it formed an obtuſe angle at the elbow, to admit of the arm and fore-arm being in a ſtate of flexion. This machine was of a ſufficient length to extend from one-third of the ſuperior part of the arm as far as the wriſt, and ſufficiently wide to cover the poſterior half of the parts juſt mentioned.

On this machine, the bandage was re-applied. This method, without the preſſure on the opening of the artery being diminiſhed, rendered the compreſſion on the other parts quite trifling; for, the machine, on which the turns of the bandage was expended, having paſſed over the artery, formed every-where an equal deſire of preſſure; and, in ſuch a manner, that the artery might be ſtrongly compreſſed, without apprehenſion of any ſwelling of the fore-arm.

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All the advantages of this contrivance were not derived in conſequence of the fatneſs of the patient; and the effuſed blood, which was trifling in the early part of the complaint, had inſenſibly extended along the anterior part of the fore-arm behind the aponeuroſis, where it was conſiderable: at the inferior part of the arm it was much leſs. The integuments, that covered the tumour at the part where the orifice was made, were livid and yellow; in the adjoining parts, the leaſt motion of the hand produced conſiderable pain.

The patient, worn out with the tedioufneſs of the complaint, wiſhed ardently for an operation, which he ſuppoſed would terminate in a cure. Theſe circumſtances, together with the impoſſibility of preventing the farther effuſion of blood by any other method, determined Mr. Deſault to make a ligature on the artery, which was done ſixteen days after the accident.

The bed was placed in the moſt favourable ſituation, with reſpect to the light; and the patient's head and breaſt a little elevated by pillows, and the ſound arm turned from the light: the affected arm was held at ſome diſtance from the trunk, and the fore-arm kept in a ſtate of extenſion, and the part to be operated on turned upwards. An aſſiſtant, on the right hand of Mr. Deſault, compreſſed the axillary artery, as it paſſes behind the clavicle over the firſt rib, by means of a cuſhion, which he held in his right hand; and, with his left hand, preſſed another cuſhion againſt the ſame artery as it paſſes under the hollow

of the axilla: by this means, no hæmorrhage could happen from the brachial artery. A ſecond aſſiſtant was employed in fixing the fore-arm; and a third was entruſted with the inſtruments and dreſſings.

Mr. Deſault, placing himſelf on the outſide of the arm, made an inciſion four inches in length in the courſe of the artery. He began it two inches below the orifice made in bleeding, and continued it upwards along the internal edge of the biceps. The cellular ſubſtance, which was divided in the firſt inciſion, was tinged with blood. The aponeuroſis at the bottom of the wound was cautiouſly divided; the effuſion of blood was immediately conſiderable; and ſome from the artery was thrown by jerks to a conſiderable diſtance. The aſſiſtant kept up the preſſure, whilſt Mr. Deſault ſearched for the artery among the cellular ſubſtance and aponeuroſis, which he lifted up with a hollow ſound. The wound having been well cleared from the grumous blood, the artery was diſengaged from the adjoining parts, a little above the part where it had been wounded in bleeding. Mr. Deſault, having firſt raiſed the median nerve, raiſed the artery with his finger and thumb, and paſſed underneath a crooked needle, rounded at its points and ſides, armed with two ſtrong waxed-thread ligatures. Having divided the ligatures near the needle, and ſeparated them, he made a ſurgeon's knot with that which was next the orifice of the artery, ſufficiently tight to prevent hæmorrhage: this was ſecured by another ſimple knot. The ends of the other ligature were left out of the edges of the wound, to afford

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an opportunity of ſecuring the artery, if the firſt ſhould by any accident get looſed. Two other ligatures were then paſſed below the opening of the artery; the one next to the binding of the arm was ſecured, and the other left looſe, as a proviſionary ligature in caſe of accident.

Theſe ligatures, above and below the orifice, were drawn ſufficiently tight to prevent hæmorrhage, but ſtill there was a little diſcharge of blood when the compreſſion was taken off, which probably came from a collateral branch, ſituated between the two ligatures. It was ſecured by including the orifice of the artery itſelf in a third ligature, larger than the other two.

Mr. Deſault, after carefully cleaning the wound from the grumous blood, ſeparated the ligatures that were tied from thoſe that were left as proviſionary ones, and left them on the outſide. The wound was lightly dreſſed with lint dipped in colophony, and, over the whole, Mr. Deſault paſſed a bandage drawn moderately tight.

The patient, who ſupported the operation with heroic courage, was then put to bed, and the arm repoſed on a ſoft pillow, and placed in ſuch a manner, that the elbow was lower than the hand and the ſuperior part of the arm. The part was covered with a warm linen cloth frequently doubled.

The reſt of the day he was tolerably eaſy, and was reſtleſs only a little towards the evening, from a pricking ſenſation he felt about the elbow. In the courſe of the night the dreſſings were ſlightly tinged with a

ſerous diſcharge, which is generally conſequent to operations of this nature. To be perfectly ſatisfied, however, Mr. Deſault changed the compreſſes. The next evening the pulſe was a little raiſed: he was at this time ſubject to a cough with retention of urine, for which he was obliged to wear a hollow bougie of the elaſtic gum. On the third day, the ſmell of the dreſſings indicated an approaching ſuppuration: at this time, there was little fever: he ſlept part of the night. The next night he did not ſleep equally well, from his cough being rather troubleſome, accompanied with a ſlight indigeſtion, occaſioned from eating ſome rice cream.

By the fifth day, ſome doſſils of lint, at the bottom of the wound, were detached by ſuppuration, which were replaced by others. The upper ligature fell off the next day, without a drop of blood being effuſed; the ſuppuration was abundant and of a good quality; and, as the ſwelling of the fore-arm ſubſided, he gradually regained the motion of his hand. The pulſations of the radial artery, which were at firſt feeble, recovered their natural force: the patient already took ſolid nouriſhment, and recovered his ſtrength ſufficiently faſt to get up in eight days after the operation. On the tenth day, the middle ligature was cut, as it admitted of being moved; but the lower one remained fixed. On the thirteenth, the bottom of the ſuperior part of the wound healed extremely faſt, and was nearly on a level with the edges of the wound, but the inferior angle had a very different appearance; and, when the fore-arm was paſſed from

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below upwards, there was a conſiderable diſcharge of matter. Its accumulation was prevented by the interpoſition of a doſſil of lint, which kept the edges of the wound ſeparate from each other. The ſuppuration ſoon diminiſhed, and it was now deemed ſufficient to dreſs the wound once inſtead of twice a day; and, to give greater freedom to the fore-arm, all compreſſes were left off, and a ſimple bandage applied immediately over the lint. At this period the patient was rather depreſſed in his ſpirits, and experienced ſome uneaſineſs in his bowels. From the uſe of ſome herb broth ſome bilious evacuations were procured, but ſtill the digeſtive organs were deranged. Two grains of emetic tartar, given in a conſiderable quantity of drink, produced a better effect; and a purgative emulſion, taken two days afterwards, completed the cure.

A few days after, the ſuppuration at the ſuperior part of the arm entirely ceaſed, and the inferior part of the wound began to cicatrize. The twenty-third day, the patient went out of the houſe for the firſt time; the motions of flexion and extenſion of the fore-arm and hand were performed without inconvenience. The diſpoſition to cicatrization ſeemed, at this time, to diminiſh, and the granulations became pale and luxuriant, and, to remove this to give them tone, they were touched with the lapis infernalis; and, by the 41ſt day, the operation of the wound was perfectly healed.

Obſervations of the Diſeaſes of the urinary Organs.

Retention of Urine, produced by Debauchery.

THIS ſpecies of retention is extremely analogous to that produced by old age, both are independent of any pre-exiſtent affection of the bladder, and ariſe only from languid action and general debility: the attack, the progreſs, and the ſymptoms, of this diſeaſe are preciſely the ſame as that which ariſes from old age, with this difference only in their pre-diſpoſing cauſe: in the one, the defect of irritability ariſes from old age, and, in the other, is to be attributed to incontinence. In the firſt caſe, it depends on ſlow and natural old age; in the other, it is premature and unnatural.

Of the different exceſſes which tend to enervate the conſtitution, there is none more prejudicial than the pleaſures of love. On the one hand, nothing produces weakneſs ſo ſoon as the loſs of the ſeminal fluid; and, on the other, the ſpaſm, which accompanies the emiſſion, enervates the ſolids, and throws the body, in the flower of youth, into all the infirmities of enfeebled old age. Tiſſot, in his eſſay of onaniſm, has given a detail of the horrid ſymptoms produced by the abuſe of that paſſion. The bladder, like all the other viſcera, becomes leſs irritable, and poſſeſſes no more

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force than is ſufficient to expel the urine: from this ariſes retention.

We ſhall not repeat here the diagnoſtic ſigns of retention which depend on weakneſs of the bladder: by the commemorative ſymptoms only we can diſtinguiſh it from that which is occaſioned by old age.

The prognoſtic is more favourable than the preceding; for, if the patient has a good conſtitution, and not in the laſt ſtage of maraſmus, this retention may be radically cured. The elaſtic gum catheter left in the bladder is one of the moſt powerful means employed for the cure of this complaint: it not only affords an eaſy paſſage to the urine, and excites the irritability of the bladder, by ſtimulating its muſcular fibres, but its conſtant preſence in the urethra prevents the patients from indulging that depraved paſſion, which was the original cauſe of their misfortune; beſides, the irritation produced by the catheter is even propagated to the vaſa deferentia, gives tone to theſe canals, the relaxation of which produced the frequent emiſſions that took place on the ſlighteſt exertion, or effort to go to ſtool: for this ſingle reaſon, theſe elaſtic bougies ſhould be had recourſe to, to cure the weakneſs occaſioned by the loſs of ſemen, even if retention did not exiſt.

Medicated bougies have been employed with this intention; but they are ſubject to many inconveniences. Firſt, the ointment that is added is uſeleſs; for, from experience, we learn that the effect they produce is to be attributed to their preſence in the urethra, as an extraneous body, and not to the nature

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of any medicament entering their compoſition, excepting thoſe of a cauſtic or eſcarotic nature. Secondly, theſe bougies, leſs in ſize at the ends that enter the bladder, do not fill up that part of the urethra, where the vaſa deferentia terminate, conſequently they do not effectually oppoſe the evacuation of the ſemen. Thirdly, they cannot be conſtantly worn, but are obliged to be withdrawn every time the patient has occaſion to make water, which is inconvenient and expenſive. Fourthly, they are ſubject to break in the urethra; and, if not well ſecured to the penis, are apt to ſlip into the bladder. The elaſtic bougies are not liable to any of theſe objections.*

But, while theſe local remedies are had recourſe to, the weak and relaxed ſtate of the general ſyſtem ſhould be attended to. The cold bath, mineral waters, bark, &c. form the baſis of this treatment. The effect of theſe medicines ſhould be ſeconded by the judicious uſe of the ſix non-naturals; ſuch as pure air, ſucculent and light food, tranquil ſleep, conſtant exerciſe of the body, moderate evacuations, and a proper regu-

* This unfortunate accident happens too frequently. Mr. Deſault has ſeen many inſtances; and, for a caſe of this nature, he invented a pair of pincers in a ſheath, bent like a catheter, with a view of extracting this extraneous body, by the way of the urethra. On the dead he ſucceeded, but was not equally fortunate in the patient for whom this inſtrument was expreſsly invented. The extreme ſenſibility of the bladder would not admit of the neceſſary reſearches; and, to effect the extraction, he was obliged to cut him in the ſame manner as for the ſtone.

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lation of the paſſions of the mind, particularly that which has produced the malady in queſtion.

Retention of Urine, produced by the Abuſe of Diuretics.

THE immoderate uſe of either warm or cold diuretics equally tend to produce this diſeaſe. The firſt, by not ſufficiently ſtimulating the fibres of the bladder, produces relaxation; the ſecond deſtroys, by uſe, the ſenſibility of that viſcus. In this laſt caſe, the bladder, accuſtomed to the action of irritating diuretics, is not capable of ſufficient contraction, when the uſe of other remedies is relinquiſhed.

It muſt be allowed, that this reaſon is more ſpeculative than practical, nor can we ſupport it by any one caſe; but ſtill it may be ſomething analogous to the effects of warm liquors on the ſtomach.

Retention of urine, occaſioned by the uſe of diuretics, cannot be diſtinguiſhed from that conſequent to debauchery and old age, but from the conſciouſneſs of drinking conſiderable quantities previous to any derangement of the excretory organs.

The local treatment ſhould be the ſame as in the retentions we have before treated of; and, if the introduction of the hollow bougie is not ſufficient to recall

call the ſenſibility of the bladder and excite its contraction, we ſhould have recourſe to the cold bath; ice-water thrown on the abdomen, the perinæum, and the ſuperior parts of the thighs; compreſſes, dipped in vinegar, applied to theſe parts; dry frictions on the hypogaſtric region, with volatile liniment, or tincture of cantharides.

If theſe means are not ſufficient to reſtore the contractile force of the bladder, a large bliſter ſhould be applied on the loins and the ſuperior part of the os ſacrum. As the object, by the application of this bliſter, is only to ſtimulate the fibres of the bladder, we do not wiſh it to ſuppurate, conſequently the cuticle ought not to be raiſed, but ſoft linen ſhould only be applied to the part. In a few days, the application of the bliſter may be re-applied on the ſame part. We have not had occaſion to employ them in theſe caſes, but are perſuaded they would be attended with ſucceſs.

Of Retention of Urine, dependant on Affection of the Nerves of the Bladder.

THESE nerves may be affected at their origin, or in their courſe. Injuries of the brain are rarely followed with retention of urine, but are often conſequent

quent to injuries of the ſpinal marrow. Commotion of the medullary ſubſtance from blows or ſhocks on the vertebræ, its diſtenſion from diſlocations or fractures of the ſpine, &c. its compreſſion by blood, pus, or water, effuſed in the vertebral canal, by the ſwelling of the bones of the vertebræ themſelves, and their different diſeaſes; theſe are ſo many cauſes of this ſpecies of retention. It may alſo be produced by tumours compreſſing the nerves in different parts in their paſſage to the bladder. The compreſſion of the whole of theſe nerves is not neceſſary to produce retention, the compreſſion of a few filaments will weaken the action of that viſcus.

When retention of urine is produced by an affection of the ſpinal marrow, inſenſibility and weakneſs of the lower extremities are always the concomitant ſymptoms. The patients ſuffer little, are ignorant of their ſituation, and complain of no derangement of the urinary organs.

The ſurgeons, aware that this accident is extremely common in theſe diſeaſes, ſhould inquire if the courſe of urine is interrupted, and ſatisfy himſelf of this fact by preſſure on the region of the bladder, or by paſſing a catheter,

This ſpecies of retention, ſuppoſing no pre-exiſtent diſeaſe of the bladder, is purely ſymptomatic, and is in itſelf of little moment; but the cauſe producing it is of the moſt dangerous deſcription. Affections of the ſpine, complicated with injuries of the ſpinal marrow, are often mortal. It is eaſy to evacuate the urine by the introduction of the catheter, but this remedy

medy is only palliative, nor will the bladder ever recover its contractile power, till the cauſe producing the debility is removed. To this object the attention ſhould then be directed; and the treatment ſhould be varied according to the nature and extent of the diſeaſe.

It is the practice of Mr. Deſault, in injuries of the ſpine, with affections of the ſpinal marrow, to apply cupping-glaſſes with the ſcarificator. This practice has been attended with the beſt ſucceſs, and, though perhaps too much extolled by the ancients, has certainly been neglected by the moderns. It is certainly one of the moſt powerful means of procuring a revulſion that ſurgery poſſeſſes. It is the practice of Mr. Deſault to apply 4 or 5 cupping-glaſſes on the part or in the neighbourhood, and to multiply the ſcarifications in proportion to the ſtrength of the patient. This operation he repeats in the courſe of the day, and continues its application for ſome following days; and, when the weakneſs of the patient forbids the uſe of the ſcarificator, the dry cupping-glaſſes are only applied. Mr. Deſault, in curvatures of the ſpine, combined with caries and deſtruction of the bodies of the vertebræ, prefers the uſe of moxa (ſo enthuſiaſtically praiſed by Mr. Poteau) to the bliſters and cauſtics, recommended by Mr. Pott, in his publication on that ſubject.

Retention

Retention of Urine from Diſtenſion of the Fibres of the Bladder.

THIS ſpecies of retention may be termed ſecondary, as it is always preceded and produced by a retention ariſing from a different cauſe; but its proximate cauſe is merely the weakneſs and loſs of irritability, occaſioned by the too great diſtenſion of its muſcular fibres: for this reaſon we often obſerve that thoſe perſons are ſubject to this diſeaſe, who, from idleneſs, baſhfulneſs, or inattention, neglect attending to the firſt deſire they may feel to make water, or, by an obſtruction in the urethra, are prevented from completing their intention. But, even if this obſtruction is removed, this viſcus, weakened by the extreme dilatation of its coats, cannot contract with force adequate to procure the complete evacuation of the urine.

The indication of cure is ſimple. We have not, as in other caſes of retention, any other complaint to encounter; and, the urine being evacuated by the catheter left in the bladder, this viſcus generally regains its tone and elaſticity: its effects may be ſeconded by the uſe of warm diuretics, tonic injections, &c. Before the uſe of the catheter is relinquiſhed, we muſt be ſatisfied that the bladder is capable of emptying itſelf of all the urine contained in its cavity; for, without this caution, we ſhould be uncertain when it would

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regain its contractility, an event that depends much on the age and temperament of the patient. With ſome, a cure is effected in a few days; in others, a few weeks; and, in ſome, it takes whole months before the patient perfectly recovers. Sometimes the tone of the bladder is irrevocably loſt, and the patient muſt wear a bougie the reſt of his life.

Retention of Urine from Inflammation of the Bladder.

MOST authors, on diſeaſes of the urinary organs, have aſſigned inflammation of the neck of the bladder as the cauſe of retention, and inflammation of its cavity as the cauſe of incontinence. They are of opinion, that the bladder, when ſenſible and inflamed, inſtead of being weakened, poſſeſſes more contractile force than uſual. But, even if we were not ſatisfied, by obſervation, that this idea is erroneous, from the occurrence of caſes, where it was impoſſible to aſſign any other cauſe than inflammation of that viſcus; even if this, Mr. Deſault obſerves, did not convince us, analogy ſhews its abſurdity.

An inflamed muſcle is not ſuſceptible of contraction; and, if forced into action, its motions are weak

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and enfeebled. Mr. Deſault remarks, that, in diſſections, inflamed inteſtines are generally found diſtended, inſtead of being contracted on themſelves.

Plethoric habits and thoſe of a bilious temperament are peculiarly ſubject to this ſpecies of retention; it is often produced by drinking ſpirituous liquors, the abuſe of warm diuretics, the internal exhibition or external application of cantharides, &c.

This ſpecies of retention appears ſuddenly, and is known by the following ſymptoms: a frequent deſire to make water, acute pain in the region of the bladder, which is propagated to the regions of the kidneys, affecting the whole courſe of the urethra, as far as the extremity of the glans: this pain is conſiderably augmented by the efforts neceſſary for the expulſion of the urine. The pulſe is hard and frequently accompanied with other ſymptoms of fever; the pain is conſiderably aggravated from preſſure on the hypogaſtric region. The catheter, in theſe caſes, is generally eaſily introduced, but exquiſite pain generally ariſes from the contact of this inſtrument with the coats of the bladder. The urine is red and indicative of inflammation; and the ſymptoms, attendant on other ſpecies of retention, in theſe caſes are not be remarked.

Theſe caſes require immediate aſſiſtance. It is neceſſary to evacuate the urine, whoſe preſence is a conſtant exciting cauſe of irritation. The introduction of the inſtrument requires ſome addreſs, particularly to avoid touching the coats of the bladder, which at this time are exquiſitely

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ſenſible. After the urine is evacuated, a mucilaginous injection of the decoction of linſeed or marſhmallow root ſhould be thrown into the bladder: this injection ſhould be retained ſome minutes, and then only part ſuffered to eſcape, that the remainder may ſoften the ſharpneſs of the urine. The catheter, after ſome time, ſhould be withdrawn, and re-introduced every three or four hours, throwing in each time a ſoftening injection.

Inflammations of the bladder may alſo be treated by remedies powerfully antiphlogiſtic, ſuch as repeated bleedings, application of leeches to the perinæum, baths, clyſters, emollient fomentations to the abdomen; cold diuretics, as emulſions, ptiſans of linſeed, whey, with ſirup of violets, veal and chicken broth, &c. But, if notwithſtanding theſe methods, the inflammation increaſes, and ſhould extend to the other viſcera, and be accompanied with hiccups and vomiting, the patient's life is in imminent danger; and, if this diſeaſe ſhould continue beyond ſix days, death is inevitable.

Caſe of an Operation for an occult Cancer, combined with a ſchirrous Gland in the Axilla.

[By Mr. CASENAVE, Surgeon to the Hôtel Dieu.]

MARY Jodan, a native of Fribourg, in Switzerland, forty-eight years of age, of a plethoric temperament and weak conſtitution, received a blow on the right breaſt, which occaſioned a ſlight ſchirrous affection of the part. Her menſes were ſuppreſſed ſome time afterwards, and, in the ſpace of ſix months, the tumour occupied the whole breaſt. She was, at this time, afflicted with conſtant and acute pain, which ſhe compared to the pricking of a needle. The axillary glands ſwelled conſiderably, and became extremely painful: at this time, the 16th of January, ſhe was admitted into the Hôtel Dieu. As this patient complained of a bitter taſte in her mouth, accompanied with a furred tongue, ſhe was ordered to live on veal broth for ſome days, and a gentle emetic was preſcribed. After a few days had intervened, two purgatives were ordered, which procured a copious evacuation.

The operation was performed, in the amphitheatre, on the 28th of July. The breaſt was diſſected off, and the veſſels ſecured in the ſame manner as in the caſe deſcribed page 86, with this difference, that the

inciſion was begun from the hollow of the axilla. The ſurgeon held one of the ſides of the external angle of the wound with the index-finger and the thumb of the left hand; and, whilſt the other angle was raiſed by an aſſiſtant, he diſſected cautiouſly the integuments of the axilla, till he expoſed the ſchirrous gland, which was about the ſize of a nut. He detached, partly with his finger and partly by diſſection, the cellular ſubſtance that ſurrounded this gland, to expoſe it more clearly to view. It was ſituated on the axillary artery, and attached to it only by a ſhort pedicle, at the centre of which the pulſation of the artery could be diſtinctly felt. A ligature was paſſed round the baſe of this pedicle, previous to the extirpation of the gland; without this precaution, it would have been difficult to check any hæmorrhage that might have occurred; for, if the veſſels, diſtributed to theſe glands, had been divided near their origin, they might have retracted on a level with the tumour of the axillary artery; and, for this reaſon, could not poſſibly be ſecured.

In the courſe of the treatment of this caſe, no circumſtance worth mentioning occurred. An iſſue was made in the left arm ſometime after the wound was cicatrized. She was diſcharged from the hoſpital perfectly cured, on the 9th of October, 1789, fifty-two days after the operation.

This woman returned to the hoſpital, ſix months afterwards, to have ſome fungoſities, that had grown round her iſſue, attended to: they were deſtroyed with the lapis infernalis. From the time of

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her diſcharge ſhe had enjoyed a moſt perfect ſtate of health.

Caſe of a ſtrangulated Hernia, reduced without an Operation.

[By Mr. Boulet, Surgeon to the Hôtel Dieu.]

PETER Marlet, an old man, 66 years of age, but of a good conſtitution, had been afflicted from his infancy with an omental hernia, which paſſed out of the right abdominal ring, and deſcended into the ſcrotum. It had not been reduced for 20 years. He wore an ill-conſtructed truſs, which was originally made for him, and the ſpring of which had been broke for many years.

He went through his uſual occupations without the leaſt attending to his complaint. But, on the 30th of September, 1790, towards noon, in attempting to lift a heavy burthen from the ground, he ſuddenly heard a noiſe, as if ſomething broke in his belly, which was ſucceeded by a ſort of rumbling noiſe in the bowels. He felt inſtantly an acute pain about the abdominal ring; and, placing his hand on the part, he found the ſize of his hernia had increaſed one-

third. Symptoms of nauſea came on immediately, and were ſucceeded by bilious vomitings, which continued during the night, and were more frequent towards the morning. The matter diſcharged by the mouth was of a blackiſh colour, and ſmelt ſtrongly of fœces; independant of this, he was afflicted with conſtant hiccups. His neighbours, frightened at theſe ſymptoms, had him conveyed to the Hôtel Dieu at 5 o'clock in the morning.

The belly was tenſe and painful, a large tumour on the outſide of the ſpermatic cord, extended from the abdominal ring into the ſcrotum, the ſkin of which was tenſe, inflamed, ſmooth, and ſhining.

There were two circumſtances worthy of remark in this tumour: inferiorly, it was unequal, denoting the preſence of omentum; and, ſuperiorly, for the ſpace of 3 or 4 inches, it was ſmooth and equal, and, on preſſure, flatus could be diſtinctly felt. From theſe circumſtances there was no doubt of the deſcent of the inteſtine. On this portion of the tumour he had applied his bandage with all the force he was capable; but, fortunately, he was put in the warm bath the moment of his admiſſion. He could ſupport it only for three-quarters of an hour, and certainly derived little advantage from its uſe.

The diſpoſition to vomit ſubſided ſome time after. Mr. Deſault here remarks, that he had not drunk any thing for a conſiderable time. He was put to bed, and laid in a horizontal poſture; the head a little raiſed, and the thighs ſlightly bent on the pelvis, and a pillar introduced between the hams. An enema

was

was adminiſtered, which brought away a conſiderable quantity of hard fœces from the large inteſtines. A large poultice was applied over the whole ſurface of the tumour, and a decoction of dog's tooth, ſweetened with ſirup of lemon, was ordered as a drink: from his diſpoſition to vomit, he was directed to take a ſpoonful at a time. The nauſea during the morning in ſome degree ceaſed, but the hiccups continued in their full frequency and force the whole morning. In the evening viſit, the tumour was found leſs tenſe and painful; there was little nauſea, and the hiccups, which for 24 hours had accompanied every expiration, left now an interval of a minute between each.

The warm bath, the enema, and the cataplaſm, were again employed, and renewed the next day in the morning. The tenſion of the abdomen now diſappeared, and the tumour was ſufficiently ſoft in the evening to admit of reduction by a ſlight degree of preſſure. An enema, that was adminiſtered in the evening, brought away much bilious matter and a quantity of meat half digeſted, that he had eaten a little before the accident.

The omental part of the hernia had diminiſhed a little in ſize, but there was ſtill a fulneſs about the inteſtine that prevented its return in the abdomen. Poultices, continued for many days, ſoftened it gradually, and by degrees the reduction was effected. The patient, who till now had no evacuations but thoſe produced by enemas, had a natural copious evacuation the following night. The abdominal ring was conſiderably dilated, and the ſlighteſt motion produced a

re-protruſion of the omentum, the return of which was rendered rather difficult, by a violent cough which he had at this period. The hernia was at length kept up by the obſervance of a horizontal poſture: graduated and thick compreſſes kept on with the ſpica bandage, until a convenient elaſtic one ſhould be made. The cough ſoon went off, and the man was diſcharged the hoſpital twelve days after his admiſſion.

Caſes of oblique Fractures of the inferior Extremity of the Thigh, with Separation of the Condyles.

CASE I.

CLAUDE Lagrange, a carrier, 31 years of age, received a kick from a horſe on the internal condyle of the left femur. On the 3d of Auguſt, 1790, the pain he experienced compelled him to ſit down on ſome ſtraw that happened to be near him. He reached home, leaping on his right foot; but this action aggravated his pain; for, at each ſtep that he made, the thigh bent at the inferior part alternately before and behind. He was brought to the Hôtel Dieu a few hours after the accident.

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The thigh, on examination, was found bent and conſiderably ſhortened; there was little ſwelling at the knee, although there was contuſion with ecchymoſis. On viewing it tranſverſely, it had a ſtretched appearance, and was more flattened from before backward than the knee of the oppoſite ſide. The patella did not project ſo much as in its natural ſtate; and, when preſſed, ſunk between the condyles; and, on approaching the condyles, by preſſing them againſt each other, it was raiſed. The condyles admitted of motion on each other when preſſed by the hand, could be ſeparated or moved in every direction with the greateſt eaſe, and were accompanied with crepitus.

Theſe circumſtances evidently proved that there was a longitudinal fracture of the condyles. The body of the femur was alſo fractured ſuperiorly, deſcending in an oblique direction from above, five inches above the external to within two inches of the internal condyle; a fact of the truth of which the ſurgeon was ſatisfied by paſſing his finger along the femur.

The muſcles of the thigh, from their ſtrong contraction, had drawn upwards that portion of the femur connected with the external condyle, and carried inferiorly the ſuperior fragment of the bone; the pointed edge of which had made a wound in the integuments, an inch and a half in length, on the inſide of the thigh, a little above the condyle.

The patient was undreſſed and put carefully to bed, (made of ſtraw,) with a hard mattreſs underneath.

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Mr. Deſault obſerves, that it was formerly the cuſtom in the Hôtel Dieu to uſe feather as well as ſtraw beds; but, from the inconveniences ariſing from their heat, and their yielding unequally in caſes of fracture, their uſe is now diſcontinued, and hard mattreſſes ſubſtituted in their room. The dreſſings having been previouſly diſpoſed on the bed, the ſurgeon proceeded to examine the wound; and, after diſengaging a piece of ſplintered bone, he proceeded to reduce the fractures in the following manner.

The counter-extenſion was made by fixing the patient to the head of the bed by proper bandages; and, whilſt one aſſiſtant ſupported him under the axilla, a ſecond kept up an extenſion, by laying hold of the foot with one hand and the heel with the other, whilſt other aſſiſtants ſupported the pelvis and the ſuperior part of the limb, to prevent the parts being ſhaken. A little inconvenience was experienced from the contraction of the muſcles during the extenſion, and the bones were brought in a ſtate of appoſition without any difficulty.

The parts were maintained in their ſituation by two circular compreſſes, and by a bandage, ſimilar to that of Scultetus;* and the inequalities of the limb filled up

* Mr. Deſault has ſubſtituted this bandage inſtead of the one with eighteen tails, and with ſome advantage in fractures of the lower extremity. This bandage is formed of an indeterminate number of diſtinct bands, three inches in width, and of length ſufficient to paſs twice round the limb. It ſhould be applied from below upwards, in ſuch a manner, that one fold ſhould be covered two-

up with coarſe linen, and the whole ſupported by two ſtrong ſplints unequal in their length and about three inches in width, and the whole covered with *drap fanon*.

The dreſſings, as before obſerved, being diſpoſed on the bed, were placed on the limb; they were wet with the aq. veg. and applied in the following manner: whilſt the extenſion was kept up by aſſiſtants, the two circular compreſſes were made to croſs each other forwards, one on the knee and the other on the inferior part of the thigh. The bandage was then applied from the ſuperior part of the leg to the upper part of the thigh: the ſides were then filled up as before with ſoft linen. The ſplints were then applied, one on the inſide, and the other externally, in ſuch a manner, that the preſſure ſhould be equal at all points. The edges of the *drap fanon* were then brought over the limb, and properly ſecured by means of tapes; care was taken to tighten them ſufficiently near the fractured parts, and to tie the knots on the outſide of the ſplints, to prevent the inconvenience of preſſure. The ſplints deſcended ſufficiently low to be on a level with the ſole of the foot, but the ouſide ſplint was conſiderably longer and reached as high as the chriſta of the ilium, whilſt the internal one extended only to the ſuperior part of the thigh. The upper end

two-thirds in its width by the ſucceeding one, forming a kind of roller, which is applied exactly to the part, covering it throughout its whole extent. The degree of compreſſion can be varied at will, and can be tightened or looſened, like the eighteen-tail bandage, without moving the fracture.

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of the outſide ſplint was tied with a napkin round the pelvis, and properly ſecured by pins. In this manner the fragments of the bone were retained; but, in a fracture ſo complicated and oblique, little hope was entertained that it could poſſibly reſiſt the effect of muſcular contraction.

In the Hôtel Dieu, means have been ſucceſsfully employed, for theſe three laſt years paſt, to counteract the effect of the contraction of muſcles in caſes of fracture. Mr. Deſault here ſpeaks of permanent extenſion; a method reprobated by the generality of practitioners, as ſubject to inconveniences, which Mr. Deſault remarks he has never obſerved in the very conſiderable numbers of patients ſubmitted to the trial.

The patient was already ſo fixed to the head of the bed, by proper bandages round the body and under the axilla, that the trunk could not deſcend. The indication then left was to prevent the thigh bending on the pelvis; which was eaſily effected, by placing thick compreſſes behind the thigh, and paſſing, above the maleoli, the middle of a bandage, the ends of which were croſſed on the back of the foot, then tied at the ſole, and fixed to the foot-board of the bed.

This extenſion, ſo far from producing inconvenience to the patient, afforded him inſtant eaſe. He was fatigued from the jolting he experienced in his way to the hoſpital, but was free from fever: no medicine but a diluting ptiſan was ordered, and he was left to enjoy his reſt, which he ſtood much in need of. The next day, his ſymptoms, in every particular, were remarkably

remarkably mild; it was only neceſſary to regulate his diet, and to keep the parts moiſt with the aq. veg. The day after, the ſame plan was obſerved; but, on the 4th day, the looſeneſs of the bandage, from the diminution of the ſwelling, rendered its re-application neceſſary. Suppuration began to take place in the wound: it was dreſſed in the ſame way as on the firſt day, and the dreſſings were re-applied with the ſame precautions.

The wound was dreſſed every two days till the ſixteenth, when it was cicatrized. After, the dreſſings were not renewed but when they were looſe. The parts were kept conſtantly moiſt with the aq. veg. and care was taken that the bandages, which procured the extenſion, were kept always tight.

The bandages, &c. were not totally left off till the ſeventy-fifth day, though the callus was ſufficiently firm ſometime before that period: all the fragments were united without deformity, and the thigh, within a few lines, was as long as the one on the oppoſite ſide; but the ſoft parts, round the articulation, were conſiderably thickened, and the patella ſeemed to form one piece with the femur.

Notwithſtanding this, the motion of the limb was ſoon reſtored, by bending and extending alternately the leg or the thigh, by means of a cuſhion, which, one day, was placed under the ham, and, the next day, under the leg; and by moving the patella, by means of the fingers, in every poſſible direction. The patient was ſoon capable of exerciſing it himſelf, and was able to walk with the aſſiſtance of crutches. The

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ſtiffneſs of the joint ſoon ſubſided, and, in three weeks, he was capable of bending, at a right angle, the leg on the thigh. He was diſcharged from the hoſpital at this time, with a certain aſſurance of ſoon recovering, by means of exerciſe, the perfect uſe of his joint.

Caſe of a fractured Thigh.

[By Mr. LANZEREZ, Surgeon to the Hôtel Dieu.]

D. RIGNAUD, a woman, 83 years old, fell down ſtairs on the 27th of October, 1790, and fractured the lower part of her right thigh, in a ſimilar direction to the preceding fracture. Thoſe, who went to her aſſiſtance, ſupported the middle of the thigh in ſuch a manner, that the lower part was bent by the weight of the leg.

This unfortunate woman was thus brought to her room, and placed croſſways on a bed, the edge of which correſponded to the fractured part. In this ſituation ſhe remained more than an hour, and then was brought from her lodging, which was on the third ſtory, (with as little precaution as they had ſupported her

her before,) and put in a hackney-coach, and conveyed to the Hôtel Dieu.

She experienced the moſt exquiſite pain: there was a conſiderable ſwelling of the thigh, which was ſhorter by 4 inches: the end of the lower fragment of the bone formed a projection at the internal and lower part of the thigh, and, above the upper fragment of the bone, there was a hollowneſs obſerved, which deſcended forwards as low as the articulation. The lower part of the thigh was diſtorted in ſuch a manner, that the external condyle was puſhed backwards, and the patella as well as the extremity was turned outwards. The condyles admitted of motion in contrary directions, and were accompanied with crepitus, as in the laſt caſe.

The mode of reduction was the ſame as in the preceding caſe, excepting that it was neceſſary to turn the knee and the point of the foot inwards. The manner of retention was preciſely the ſame, and the pain ſoon ſubſided after the application of the dreſſings. As this woman, in conſequence of her age, and a previous indiſpoſition, was weak and infirm, the obſervance of a ſtrict diet was deemed unneceſſary. Towards the evening the pain in her thigh had ceaſed entirely, but at night ſhe was much inconvenienced by the bandage that was paſſed round her breaſt, in conſequence of a cough and aſthma with which ſhe had been afflicted many years. This means of extenſion, for this reaſon, was relinquiſhed, and another was employed that did not bear the leaſt on the breaſt. It was effected by the uſe of a long inflexible ſplint, extending from the chriſta of the ilium to 4 inches

below

below the ſole of the foot. This ſplint was notched at one of its ends, and pierced, at one inch from this notch, with a tranſverſe hole. The oppoſite end of the ſplint was placed in the duplicature of the bandage that was paſſed round the pelvis, in the ſame manner and in the ſame place where the outſide ſplint was firſt ſituated. It was removed, and the one in queſtion applied in its ſtead.

The bandage that had been paſſed round the trunk was retained in its poſition by two bands, which paſſed under the thighs and before the groins, over thick compreſſes; and the band, on the ſide that was not injured, was pinned to the inferior part of the bandage that was paſſed round the trunk, and the other ſecured by a knot, fixed on that end of the ſplint engaged in the ſame bandage.

The dreſſings applied on the limb were preciſely the ſame as were employed the day before, when it was neceſſary to tighten the tapes that retained the dreſſings. Inſtead of fixing the band that ſurrounded the foot to the bed-poſts, the end, that was on the outſide, was paſſed through the hole in the ſplint, and the other placed in the notch, and ſecured by a knot. After they had been drawn ſufficiently tight by this plan, the ſame extenſion was kept up, without bearing on the thorax.

The patient ſupported this extenſion extremely well, and without ſuffering the leaſt inconvenience, nor was there a neceſſity to remove the dreſſings till the 4th day, when the bandage became looſe from the diminution of the ſwelling.

Until